

20020717.qrp v02\_n619.qrl.20020717

Date: Wed, 17 Jul 2002 19:03:06 EDT  
From: qrp-l@Lehigh.EDU  
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>  
Subject: QRP-L digest 2619

QRP-L Digest 2619

Topics covered in this issue include:

- 1) [129906] NOISE BRIDGE Info...  
by "ss lyon" <sslyon@megalink.net>
- 2) [129907] RE: stacked toroids  
by "Tracy Markham" <tracy@bytemark.com>
- 3) [129908] Re: Charging a 150amp/hr battttery  
by "Joe W2KJ" <w2kj@earthlink.net>
- 4) [129909] Re: Charging a 150amp/hr battttery  
by "John J. McDonough" <wb8rcr@arrl.net>
- 5) [129910] Re: KIT: the 'Rock-mite'  
by Michael Babineau <michael.babineau@sympatico.ca>
- 6) [129911] Re: DSW-20  
by "Paul Christensen" <w9ac@arrl.net>
- 7) [129912] Subject: Driver for LCD Camera  
by George Franklin <w0av@juno.com>
- 8) [129913] FS: Ni-MH Battery Pack and 2 little power supplies  
by "Dan Reynolds" <bcdlr@insightbb.com>
- 9) [129914] REf. LCD Camera Driver  
by George Franklin <w0av@juno.com>
- 10) [129915] FS Kenwood CW Xtal Filter  
by "Robert Armstrong" <barmstrong@sisna.com>
- 11) [129916] Rock-mite in Calif.  
by dave f epps <dave\_epps@juno.com>
- 12) [129917] Re: KIT: the 'Rock-mite'  
by "Rod N0RC" <rod@n0rc.us>
- 13) [129918] Re: Artificial RF Ground N0!  
by Bill Coleman <aa4lr@arrl.net>
- 14) [129919] Rock-Mite Tick compatible???
- by "Trevor Jacobs" <kg6cyn@earthlink.net>
- 15) [129920] SALE: Ten Tec Filters  
by "Jay Bromley" <w5jay@alltel.net>
- 16) [129921] RE: stacked toroids  
by David Hinerman <WD8CIV@worldnet.att.net>
- 17) [129922] Re: KIT: the 'Rock-mite'  
by "Rod N0RC" <rod@n0rc.us>
- 18) [129923] SALE: Irad filters for Ten Tec  
by "Jay Bromley" <w5jay@alltel.net>
- 19) [129924] Re: Radial Lengths (long, was dipping traps)

by "Karl F. Larsen" <k5di@zianet.com>  
20) [129925] RE: stacked toroids  
by Nick Kennedy <nkennedy@tcainternet.com>  
21) [129926] Re: Noise Bridge... oooops!  
by "Karl F. Larsen" <k5di@zianet.com>  
22) [129927] Re: KIT: the 'Rock-mite'  
by <bowerm@ix.netcom.com>  
23) [129928] Re: Radial Lengths (long, was dipping traps)  
by "James R. Duffey" <jamesd1@flash.net>  
24) [129929] Re: Radial Lengths (long, was dipping traps)  
by "James R. Duffey" <jamesd1@flash.net>  
25) [129930] RE: stacked toroids  
by David Hinerman <WD8CIV@worldnet.att.net>  
26) [129931] Re: Artificial RF Ground NO!  
by Dave Hottell <hottell@gulftel.com>  
27) [129932] Re: 2N5564 good at RF  
by "James R. Duffey" <jamesd1@flash.net>  
28) [129933] Re: Rock-Mite Mod #1  
by "James R. Duffey" <jamesd1@flash.net>  
29) [129934] Re: [TenTec] SALE: Irad filters for Ten Tec  
by "Jay Bromley" <w5jay@alltel.net>  
30) [129935] Re: tentec filters  
by "Jay Bromley" <w5jay@alltel.net>  
31) [129936] 5 watt Smk-1 mod....Pixie II  
by Jason <kc7eip@shaw.ca>  
32) [129937] Aftermarket HT Batteries - THANKS  
by "Brian P. Mileschosky" <n5zgt@swcp.com>  
33) [129938] Re: KIT: the 'Rock-mite'  
by "Dennis Ponsness" <wb0wao@hotmail.com>  
34) [129939] Albuquerque Duke City Hamfest  
by "Brian P. Mileschosky" <n5zgt@swcp.com>  
35) [129940] Re: Radial Lengths (long, was dipping traps)  
by Ade Weiss W0RSP <adeweiss@sd.value.net>  
36) [129941] 17 Birdies killed!  
by Bill Meara <n2cqr@clix.pt>  
37) [129942] Re: 2N5564 good at RF?  
by "Leon Heller" <leon\_heller@hotmail.com>  
38) [129943] Re: QRP Excellance  
by George Gingell <k3tks@u1.abs.net>  
39) [129944] Re: Battery Charging  
by George Gingell <k3tks@u1.abs.net>  
40) [129945] K2 working PACTOR @ 5 watts  
by "Jim" <sunwatt@starband.net>  
41) [129946] Re: Radial Lengths (long, was dipping traps)  
by "Karl F. Larsen" <k5di@zianet.com>  
42) [129947] Fw: Major Solar Flare prompts an Aurora Watch  
by Wayne Rogers <w5kdj@juno.com>  
43) [129948] Two-Four-Six-Eight

by "Frank Emens" <femens@hiwaay.net>  
44) [129949] NOISE BRIDGE Info...  
by John R Kirby <n3aaz-qrp@juno.com>  
45) [129950] Re: K2 working PACTOR @ 5 watts  
by "Karl B. Staddon" <ve6kbs@agt.net>  
46) [129951] HOWTO: Drilling Holes in Altoids Tins  
by "Rod NØRC" <rod@nØrc.us>  
47) [129952] Re: HOWTO: Drilling Holes in Altoids Tins  
by Dave Fouchey <dafouchey@comcast.net>  
48) [129953] Re: K2 working PACTOR @ 5 watts  
by "Jim" <sunwatt@starband.net>  
49) [129954] Re: Noise Bridge... case  
by "ss lyon" <sslyon@megalink.net>  
50) [129955] Re: HOWTO: Drilling Holes in Altoids Tins  
by "Leon Heller" <leon\_heller@hotmail.com>  
51) [129956] Tuthill registrations  
by "Bob Hightower" <nk7m@extremezone.com>  
52) [129957] Re: Rock-Mite Mod #1  
by Chuck Adams <k7qo@earthlink.net>  
53) [129958] Re: 2N5564 good at RF?  
by "Brad Hernlem" <alihernlem@hotmail.com>  
54) [129959] Re: KIT: the 'Rock-mite'  
by "Steve Lawrence" <Steve.Lawrence@itwfeg.com>  
55) [129960] Re: HOWTO: Drilling Holes in Altoids Tins  
by "Ingo Meyer, DK3RED" <dk3red@t-online.de>  
56) [129961] Re: 2N5564 good at RF?  
by David Hinerman <WD8CIV@worldnet.att.net>  
57) [129962] Re: HOWTO: Drilling Holes in Altoids Tins  
by "Brian.Buydens@usask.ca" <buydens@duke.usask.ca>  
58) [129963] Re: Radial Lengths (long, was dipping traps)  
by Bruce Muscolino <w6toy@erols.com>  
59) [129964] Re: Fw: Major Solar Flare prompts an Aurora Watch  
by Steven Weber <kd1jv@moose.ncia.net>  
60) [129965] KITS: The AAPB, SMT KIT II  
by Steven Weber <kd1jv@moose.ncia.net>  
61) [129966] Re: Rock-Mite Mod #1  
by "Bill Jones" <kd7s@psnw.com>  
62) [129967] Re: HOWTO: Drilling Holes in Altoids Tins  
by "Bob Tellefsen" <n6wg@earthlink.net>  
63) [129968] Four State QRP Group Wednesday Warble  
by "David Bixler" <qrp@netins.net>  
64) [129969] Re: Four State QRP Group Wednesday Warble  
by "w8diz" <w8diz@fpqrp.com>  
65) [129970] Re: HOWTO: Drilling Holes in Altoids Tins  
by "Mark J. Dulcey" <mark@buttery.org>  
66) [129971] Re: Tuthill registrations  
by Bruce Grubbs <mail@brucegrubbs.com>  
67) [129972] Re: HOWTO: Drilling Holes in Altoids Tins

- by "Mike Yetsko" <myetsko@insydesw.com>
- 68) [129973] NOISE BRIDGE INFO on NEQRP Site  
by "ss lyon" <sslyon@megalink.net>
- 69) [129974] Solar Charger control unit  
by <mgoins@usa.net>
- 70) [129975] RE: Charging a 150amp/hr battttery  
by "Brian B. Riley \ (N1BQ\ ) ListAcct" <n1bq\_list@wulfden.org>
- 71) [129976] Re: Solar Charger control unit  
by "M.M." <markem@cox.net>
- 72) [129977] Solar death!  
by "Mike Yetsko" <myetsko@insydesw.com>
- 73) [129978] Anybody Else Using the K9AY 20M QRP Xcvr?  
by n5wbishp@blkbox.com
- 74) [129979] Moving sale continues (July 17)  
by "Hudson, Steve (RBI-US CMD)" <sdhudson@reedbusiness.com>
- 75) [129980] NETXQRP Club Meeting 20 July '02  
by Chuck Carpenter <w5usj@9plus.net>
- 76) [129981] Re: SPECIAL EVENT ANNOUNCEMENT JULY 20-21 MUSEUM SHIPS EVENT  
(RADIO OPS)  
by n5ib@juno.com
- 77) [129982] Four State QRP Group Luncheon Get-together This Saturday  
by "David Bixler" <grp@netins.net>
- 78) [129983] Re: Rock-Mite Mod #1  
by "Oleg V. Borodin" <master72@lipetsk.ru>
- 79) [129984] Re: Solar Charger control unit  
by "Karl F. Larsen" <k5di@zianet.com>
- 80) [129985] Re: Solar Charger control unit  
by "Tom Curtola" <tcurtola@rogers.com>
- 81) [129986] Re: Solar Charger control unit  
by "Richard Brummer, K2JQ" <k2jq@rcn.com>

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Date: Wed, 17 Jul 2002 07:12:32 -0400  
From: "ss lyon" <sslyon@megalink.net>  
To: "chat qrp" <grp-l@lehigh.edu>  
Subject: [129906] NOISE BRIDGE Info...  
Message-ID: <004d01c22d82\$d9086680\$aac7e742@megalink.net>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Check out the NEQRP prelim. release application info at:

<http://www.qsl.net/wq1rp/noisebrg.htm>

Note that price is \$17 postage paid Cont. North America.

Hoping to hear more 'from the field' re specific applications for this little gem. We'll post them on the NEQRP web site.

72/73

AA1MY

Seabury & Sharon Lyon  
99 Sparrowhawk Mtn Rd  
Bethel ME, 04217 U.S.A.  
207-836-2576

Virus Protection by Norton and ZoneAlarm

-----  
Date: Tue, 16 Jul 2002 16:27:52 -0700  
From: "Tracy Markham" <tracy@bytemark.com>  
To: "QRP-L" <qrp-l@lehigh.edu>  
Subject: [129907] RE: stacked toroids  
Message-ID: <GNEOLGDJDOPEALHJMKLCOELGCGAA.tracy@bytemark.com>  
MIME-Version: 1.0  
Content-Type: text/plain;  
                charset="Windows-1252"  
Content-Transfer-Encoding: 7bit

Gang -

My engineer stated that indeed the A1 values is NOT linear, stated there is little empirical study made on the subject as there are 'A' 'B' and 'C' sizing on most of the cores that would normally be stacked.

It would be interesting for someone to go through and do measurements with the main mixes and sizes, with stacks of 2 and 3 cores.

I would be willing to supply the cores to someone who could accurately measure and chart the results. I don't know how accurate the hand-held inductance meters are - we have them here but only use them in the shop for comparative measurements. Our HP unit has a printer port ... but I'm not willing or able to sit and do the evaluation.

I'd say that the sizes and mixes and turns to test would be something like what follows. I would think that the resulting chart would be very useful and interesting. It would have to be done twice or more to ensure accuracy ...

Sizes  
Powdered Iron  
T-25

T-50  
T-68  
T-106

Ferrite  
FT-23  
FT-50  
FT-82 / 87  
FT-114

Mixes  
Powdered Iron  
1  
2  
6  
10  
(17?)

Ferrite  
43  
61  
75 / J  
77  
F

Turns  
1  
5  
10  
20 (larger cores)

That's A LOT of cores and winding. If I did my math right, that's three each of 36 cores or 108 cores. These would be wound and un-wound a couple of times, because I couldn't possibly supply enough cores to do both the stacks of 2 and 3 each. (something like 160 or so)

I don't own the place no mo :( but I have a large personal stock I could pull from. It would be nice if I could have 'em back ... but that's not the biggest deal. The big deal would be that the info is as accurate and consistent as possible.

Reply off-list if you're seriously interested.  
Tracy N4LGH

Dave,

Doing some measurement with a pair of T50-6 torroids, I got the following:

1 core and 10 turns measured 0.6uH

2 cores and 10 turns measured 0.9uH

It's not linear, of course, but the relationship should be the same.

-----  
Date: Tue, 16 Jul 2002 19:37:10 -0400  
From: "Joe W2KJ" <w2kj@earthlink.net>  
To: "qrp-1" <qrp-1@lehigh.edu>  
Subject: [129908] Re: Charging a 150amp/hr battttery  
Message-ID: <003201c22d21\$b5905160\$4735323f@cdcvh01>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Many thanks to all the wonderful suggestions regarding  
charging the Gates Cyclon batteries.

I will consider all the info before attempting to charge those  
puppies.

73, Joe W2KJ

-----  
Date: Tue, 16 Jul 2002 20:01:03 -0400  
From: "John J. McDonough" <wb8rcr@arrl.net>  
To: "Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>  
Cc: <w2kj@earthlink.net>  
Subject: [129909] Re: Charging a 150amp/hr battttery  
Message-ID: <00e101c22d25\$0bee4640\$010044c0@chartermi.net>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

There is something else I didn't see mentioned directly.

These batteries are capable of delivering an astonishing amount of current  
in a short time. Somebody did mention a fuse, but failed to mention what  
could happen if you omitted it. He also mentioned "near" the battery - be

ABSOLUTELY CERTAIN that nothing conductive can get anywhere upstream of the fuse, other than the wire to the fuse. Arrange some way to get those battery contacts firmly encased in plastic before you attempt anything else.

We tend to get a bit cavalier about this electricity stuff since most of our equipment operates from 12 volts. But twelve volts at a few hundred amps can be truly terrifying. I once saw an open end wrench simply disappear when it came across the contacts of one of these puppies. Fortunately, it wasn't in anyone's hand, but a half pound of steel turned into vapor in a few milliseconds is a thing to behold. Imagine what that hot plasma could do to your body!

Play safe!

72/73 de WB8RCR      <http://www.qsl.net/wb8rcr>  
didileydadidah      QRP-L #1446 Code Warriors #35

----- Original Message -----

From: "Joe W2KJ" <w2kj@earthlink.net>  
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>  
Sent: Tuesday, July 16, 2002 7:37 PM  
Subject: Re: Charging a 150amp/hr battttery

```
> Many thanks to all the wonderful suggestions regarding  
> charging the Gates Cyclon batteries.  
>  
> I will consider all the info before attempting to charge those  
> puppies.  
>  
73, Joe W2KJ
```

Date: Tue, 16 Jul 2002 20:04:51 -0400  
From: Michael Babineau <michael.babineau@sympatico.ca>  
To: qrp-l@lehigh.edu  
Subject: [129910] Re: KIT: the 'Rock-mite'  
Message-ID: <D0F0F1C0-9918-11D6-929D-00039309268A@sympatico.ca>  
Content-Type: text/plain; charset=US-ASCII; format=flowed  
Mime-Version: 1.0 (Apple Message framework v482)  
Content-Transfer-Encoding: 7bit



It occurred to me that the Rock-mite along with a Rainbow tuner would make a very compact pocket station (2 altoids tins). Any chance that NJQRP will do another run of the Rainbow tuner kit for those of us who missed out?

Anyone with an unbuilt Rainbow tuner kit interested in selling???

Michael VE3WMB

-----  
Date: Tue, 16 Jul 2002 20:03:52 -0400  
From: "Paul Christensen" <w9ac@arrl.net>  
To: "Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>  
Subject: [129911] Re: DSW-20  
Message-ID: <001d01c22d25\$6f649da0\$7601a8c0@attbi.com>  
MIME-Version: 1.0  
Content-Type: text/plain;  
                charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

A sincere thanks to everyone who responded. The DSW is sold.

Paul

----- Original Message -----  
From: "Paul Christensen" <w9ac@arrl.net>  
To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>  
Sent: Tuesday, July 16, 2002 17:47 PM  
Subject: FS: DSW-20

> I'm getting ready for the debut of the new DSW-II!  
>  
> DSW-20 in perfect operating and cosmetic condition. Stock DSW-20...no  
mods done. Includes gorgeous blue anodized case and owner's  
> manual. \$110 + \$5.00 shipping. Please reply via private e-mail.  
>  
> -Paul  
>  
>

-----  
Date: Tue, 16 Jul 2002 19:14:27 -0500

From: George Franklin <w0av@juno.com>  
To: qrp-1@lehigh.edu  
Subject: [129912] Subject: Driver for LCD Camera  
Message-ID: <20020716.191428.-1516977.0.w0av@juno.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Estimated Colleagues,

I have a cheapie LCD camera branded Earthlink-Sprint (worked great) which I got on a promotional deal a few years back, but I have misplaced the driver disk for it.

Can anyone suggest a source from which I could download a suitable driver.

Oh, yes. This is definitely a QRP camera in size and performance.

TIA!

72 de George/W0AV  
Hamming since '35  
SOC#101, COG#1, PITA#1, K2 SN 550, RA37627153, etc.

-----  
Date: Tue, 16 Jul 2002 19:22:32 -0500  
From: "Dan Reynolds" <bcdlr@insightbb.com>  
To: <bcdlr@insightbb.com>  
Subject: [129913] FS: Ni-MH Battery Pack and 2 little power supplies  
Message-ID: <000301c22d28\$0b04f050\$0100a8c0@c1641599a>  
MIME-Version: 1.0  
Content-Type: text/plain;  
                charset="us-ascii"  
Content-Transfer-Encoding: 7bit

I have a Mitsubishi battery pack, 9.6V 3100mAh, NiMH. Never used. Reading 10.14 volts right now... So, it's good. \$15 shipped. (I might have another of these and if I can find it I would make a deal of \$25 shipped for both)

I have (2) little Compaq Switcher supplies (2"x2.5"x1"), 10V 1.5A. Removable polarized AC plug & cord, with barrel connector (centers' even postive) and cord on the output. \$12 shipped each or \$20 for both.

Dan Reynolds KB9JL0

-----  
Date: Tue, 16 Jul 2002 19:48:30 -0500  
From: George Franklin <w0av@juno.com>  
To: qrp-1@lehigh.edu  
Subject: [129914] REf. LCD Camera Driver  
Message-ID: <20020716.194830.-1516977.1.w0av@juno.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Esteemed Colleagues!

Honest, I didn't really think you were all that Estimed (sic) or (sick).

I still need that driver, however.

Sorry about that!

72 de George/W0AV  
Now just PITA#1

-----  
Date: Tue, 16 Jul 2002 18:54:46 -0600  
From: "Robert Armstrong" <barmstrong@sisna.com>  
To: <qrp-1@lehigh.edu>  
Subject: [129915] FS Kenwood CW Xtal Filter  
Message-ID: <000701c22d2c\$8f17ae60\$1b11fea9@armstrong1>  
MIME-Version: 1.0  
Content-Type: text/plain;  
                charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

FS: Kenwood YK-88C-1 500 Hz CW crystal filter - like new condition.

I purchased it new and used it in a TS570S now sold to a SSB enthusiast.

Current new price at HRO is \$129.95

Asking \$95 I ship (Enough to pay for a new SW20+ kit!)

Bob N7XJ  
Manti Ut

Date: Tue, 16 Jul 2002 18:07:56 -0700  
From: dave f epps <dave\_epps@juno.com>  
To: qrp-1@lehigh.edu  
Subject: [129916] Rock-mite in Calif.  
Message-ID: <20020716.181955.-321857.0.dave\_epps@juno.com>  
MIME-Version: 1.0  
Content-Type: text/plain  
Content-Transfer-Encoding: 7bit

Just received confirmation of my Rock-mite order from Dave B. at Small Wonder Labs.

I am also interested in an 80 mtr. version. 20 mtrs would be nice.  
dave ab5pc Morro Bay, Ca.

-----  
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<http://dl.www.juno.com/get/web/>.

-----  
Date: Tue, 16 Jul 2002 19:12:57 -0600  
From: "Rod N0RC" <rod@n0rc.us>  
To: <michael.babineau@sympatico.ca>,  
"Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>  
Subject: [129917] Re: KIT: the 'Rock-mite'  
Message-ID: <002b01c22d2f\$1688eba0\$6501a8c0@greyrock>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Michael, et.al.,

Another possibility is the NorCal BLT, still available I believe. I just tried my BLT with my Rocky Mountain "Rock-Mite". Seems to work fine. I did have to tune-up with my MFJ-259, then attach the Rock-Mite. The absorptive bridge/swr indicator of the BLT doesn't seem to work with 400-500 mWatt input. Does anybody know of a way to increase the sensitivity of the BLT tuning indicator?

73, Rod N0RC

----- Original Message -----  
From: "Michael Babineau" <michael.babineau@sympatico.ca>  
To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>

Sent: Tuesday, July 16, 2002 6:04 PM  
Subject: Re: KIT: the 'Rock-mite'

>  
> It occurred to me that the Rock-mite along with a Rainbow tuner  
would  
> make a  
> very compact pocket station (2 altoids tins). Any chance that NJQRP  
will  
> do another run  
> of the Rainbow tuner kit for those of us who missed out?  
>  
> Anyone with an unbuilt Rainbow tuner kit interested in selling???  
>  
> Michael VE3WMB  
>  
>

-----  
Date: Tue, 16 Jul 2002 21:16:20 -0400  
From: Bill Coleman <aa4lr@arrl.net>  
To: <k5di@zianet.com>,  
"Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>  
Subject: [129918] Re: Artificial RF Ground NO!  
Message-ID: <20020717011751.EVBC1189.imf05bis.bellsouth.net@[192.168.0.20]>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="US-ASCII"

On 7/2/02 11:26 AM, Karl F. Larsen at k5di@zianet.com wrote:

>The proper length is found from the formula that gives the  
>length of a 1/2 wave which is  $468/f(\text{MHz})$  so the counterpoise wants to be  
>half that length or  $(468/f(\text{MHz}))/2$ . On my calculator that cost \$10.00 15  
>years ago a counterpoise for 7.040 MHz will be 33.2 feet long. You can  
>calculate the other frequencies yourself.

Uh, well, yes and no.

The formula  $468/f$  is for a dipole in feet. Note that this is somewhat shorter than the formula for 1/2 wave in free space ( $492/f$ ). Just shy of 5% shorter.

The reason for the shortening is two fold. First, you have to consider

the velocity factor of the wire, because the electrical current doesn't quite travel at the speed of light. This is around 1%. Second, the ends of the wire have considerable capacitive coupling to the insulators. This capacitive effect ends up contributing the remainder.

So, for a counterpoise, I would start with the  $492/f$  formula, just so you don't end up shortchanged. And that would be 34.9 feet. You can always cut more off if you have to.

Bill Coleman, AA4LR, PP-ASEL                      Mail: aa4lr@arrl.net  
Quote: "Not within a thousand years will man ever fly!"  
      -- Wilbur Wright, 1901

-----  
Date: Tue, 16 Jul 2002 18:21:34 -0700  
From: "Trevor Jacobs" <kg6cyn@earthlink.net>  
To: "Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>  
Subject: [129919] Rock-Mite Tick compatible???  
Message-ID: <002701c22d30\$4acbde30\$d3e8b3d1@tjnotebook>  
MIME-Version: 1.0  
Content-Type: text/plain;  
              charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Was just thinking, that if the Rock-Mite was Tick Keyer compatible, it'd make a great little beacon rig! Dave, is it by any chance pin compatible with the Tick 4?

73's Trev KG6CYN

-----  
Date: Tue, 16 Jul 2002 20:32:58 -0500  
From: "Jay Bromley" <w5jay@alltel.net>  
To: <tentec@contesting.com>  
Cc: <qrp-l@lehigh.edu>  
Subject: [129920] SALE: Ten Tec Filters  
Message-ID: <013101c22d31\$e2eb15e0\$6518150a@Alltel>  
MIME-Version: 1.0  
Content-Type: text/plain;  
              charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

HI Gang,

I these Ten-Tec Filters left for sale. I will ship each for \$60 or \$100 for the pair.

Address and phone # below sale items. Thank you and 73 de w5jay..

288- 1.8 KHz 8 pole 6.3 MHz SSB Filter

216- 500 Hz 6 pole 9 MHz FSK Filter

Jay Bromley  
9505 Bryn Mawr Circle  
Fort Smith, AR. 72908-9276

Phone # 479-651-7012  
w5jay@arrl.net

-----  
Date: Tue, 16 Jul 2002 21:32:44 -0400  
From: David Hinerman <WD8CIV@worldnet.att.net>  
To: qrp-l@lehigh.edu  
Subject: [129921] RE: stacked toroids  
Message-ID: <5.1.0.14.1.20020716212726.00b2c890@postoffice.worldnet.att.net>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"; format=flowed

Tracy,

I'd be willing to do the testing, but I don't have any way of measuring small (<10 uH) inductances that I trust. (That's why I asked about stacking cores instead of just trying it.) The lowest range on our LC meter at work is 100 uH full scale. We have an old HP LCR bridge, but it's so long out of cal that I'd be reluctant to even try. We don't even have any decent standard inductances around - we do mostly 50 & 60 Hz power stuff.

Dave

At 04:27 PM 7/16/2002 -0700, you wrote:

>Gang -

>

>My engineer stated that indeed the A1 values is NOT linear, stated there is  
>little empirical study made on the subject as there are 'A' 'B' and 'C'

>sizing on most of the cores that would normally be stacked.  
>  
>It would be interesting for someone to go through and do measurements with  
>the main mixes and sizes, with stacks of 2 and 3 cores.  
>  
>I would be willing to supply the cores to someone who could accurately  
>measure and chart the results. I don't know how accurate the hand-held  
>inductance meters are - we have them here but only use them in the shop for  
>comparative measurements. Our HP unit has a printer port ... but I'm not  
>willing or able to sit and do the evaluation.  
>  
>I'd say that the sizes and mixes and turns to test would be something like  
>what follows. I would think that the resulting chart would be very useful  
>and interesting. It would have to be done twice or more to ensure accuracy  
>...  
>  
>Sizes  
>Powdered Iron  
>T-25  
>T-50  
>T-68  
>T-106  
>  
>Ferrite  
>FT-23  
>FT-50  
>FT-82 / 87  
>FT-114  
>  
>Mixes  
>Powdered Iron  
>1  
>2  
>6  
>10  
>(17?)  
>  
>Ferrite  
>43  
>61  
>75 / J  
>77  
>F  
>  
>Turns  
>1  
>5  
>10



>20 (larger cores)  
>  
>That's A LOT of cores and winding. If I did my math right, that's three each  
>of 36 cores or 108 cores. These would be wound and un-wound a couple of  
>times, because I couldn't possibly supply enough cores to do both the stacks  
>of 2 and 3 each. (something like 160 or so)  
>  
>I don't own the place no mo :( but I have a large personal stock I could  
>pull from. It would be nice if I could have 'em back ... but that's not the  
>biggest deal. The big deal would be that the info is as accurate and  
>consistent as possible.  
>  
>Reply off-list if you're seriously interested.  
>Tracy N4LGH  
>  
>Dave,  
>  
>Doing some measurement with a pair of T50-6 torroids, I got the following:  
>  
>1 core and 10 turns measured 0.6uH  
>  
>2 cores and 10 turns measured 0.9uH  
>  
>It's not linear, of course, but the relationship should be the same.

-----  
"You can fool some of the people all of the time. That's enough to make a  
living." - Lance Burton  
-----

Dave Hinerman  
WD8CIV@att.net

-----  
Date: Tue, 16 Jul 2002 19:41:15 -0600  
From: "Rod N0RC" <rod@n0rc.us>  
To: "Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>  
Cc: "Michael Babineau" <michael.babineau@sympatico.ca>  
Subject: [129922] Re: KIT: the 'Rock-mite'  
Message-ID: <009601c22d33\$0adc7fc0\$6501a8c0@greyrock>  
MIME-Version: 1.0  
Content-Type: text/plain;  
                charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Excuse me, what was I thinking?!? The absorptive bridge of the BLT  
works just fine with the Rock-Mite!

I had the switch in the wrong position, I hate it when I do that!

If anybody wants me, I'll be in the corner, staring at the wall, thinking about how dumb my claim was, embarrassed....

73, Rod N0RC .....sigh...

----- Original Message -----

From: "Rod N0RC" <rod@n0rc.us>

To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>

Sent: Tuesday, July 16, 2002 7:12 PM

Subject: Re: KIT: the 'Rock-mite'

> Michael, et.al.,

>

> Another possibility is the NorCal BLT, still available I believe. I

> just tried my BLT with my Rocky Mountain "Rock-Mite". Seems to work

> fine. I did have to tune-up with my MFJ-259, then attach the

> Rock-Mite. The absorptive bridge/swr indicator of the BLT doesn't seem

> to work with 400-500 mWatt input. Does anybody know of a way to

> increase the sensitivity of the BLT tuning indicator?

-----  
Date: Tue, 16 Jul 2002 21:02:02 -0500

From: "Jay Bromley" <w5jay@alltel.net>

To: <tentec@contesting.com>

Cc: <qrp-l@lehigh.edu>

Subject: [129923] SALE: Irad filters for Ten Tec

Message-ID: <013f01c22d35\$f22012a0\$6518150a@Alltel>

MIME-Version: 1.0

Content-Type: text/plain;  
charset="iso-8859-1"

Content-Transfer-Encoding: 7bit

Hi,

I have the following Inrad filters for sale like new in the original boxes. Prices include shipping.

Inrad #755 6298.5 kHz 2800 Hz SSB \$85.00

Inrad #754 9001.5 kHz 2800 Hz SSB \$85.00

Inrad #753 9000.6 kHz 400 Hz CW \$85.00

Inrad #751 6299.25 kHz 259 Hz CW \$85.00

Jay Bromley W5JAY  
9505 Bryn Mawr Circle  
Fort Smith, AR. 72908-9276

w5jay@arrl.net

Thank you and 73 de jay..

-----  
Date: Tue, 16 Jul 2002 20:33:19 -0600 (MDT)  
From: "Karl F. Larsen" <k5di@zianet.com>  
To: "James R. Duffey" <jamesd1@flash.net>  
Cc: Low Power Amateur Radio Discussion <qrp-1@lehigh.edu>  
Subject: [129924] Re: Radial Lengths (long, was dipping traps)  
Message-ID: <Pine.LNX.4.44.0207161949080.3248-1000000@Daisy.dog>  
MIME-Version: 1.0  
Content-Type: TEXT/PLAIN; charset=US-ASCII

Hi James, your long and difficult to understand (by me) paper for many radials that establish what I believe to be a method to couple to real earth much like a large capacitor plate deals with whether the radials are 1/4 wavelength or longer. I think your real data indicated that 1/2 wavelength radials got some-what better results.

Let's back up for a moment and look at the problem. We have a 1/4 wave ground plane which requires the other 1/4 wave section be made up of a good ground plane. If the ground plane is "perfect" the antenna radiates like a vertical 1/2 wave dipole at ground level.

But, we never have a perfect ground plane. This in an equivalent circuit (series) that has the antenna which at the feed point is 36 ohms (half of the dipole 72 ohms), and some resistor that is the loss in the

ground system. When I hear of a guy who has his 1/4 wave vertical all done and at resonance his measured feed point impedance is 72 ohms, and it works "great", I say fine, glad your pleased, but half of your power into the antenna is wasted in heating a resistor. In fact this example has total power divided between the antenna (36 ohms) and the ground resistance  $72 - 36 = 36$  ohms. In fact many verticals are this bad.

If you ground mount a 1/4 wave vertical you face the problem of a capacitive coupling to "Real Ground". What if you live in the Southwest deserts where we have flat roofs and decide to put the vertical on the roof?

In fact on my roof is a Butternut 80/40 1/4 vertical with only 4 insulated .25 wave radials. I have a MFJ Antenna Analyser and I hooked it to the feed point with 6 inches of coax. With no radials at resonance this antenna had a feed point impedance of 85 ohms. With 1 radial resonance frequency changed and the impedance dropped to 60 ohms. With 2 radial it dropped to 54 ohms. With 3 radials it dropped to 48 ohms and with 4 tuned radials it dropped to 40 ohms! This means my power is across a 36 ohm and 4 ohm resistor in series so about 10% of the power is being lost in the ground system. I think with tuning the radials (if I could figure out how to do it) could reduce the loss even more.

So in summary, I think it's a good idea to mount your 1/4 wave vertical on a roof. Takes fewer radials. Also if your vertical is ground mounted and you have a MFJ Antenna Analyser you can make the same measurement and a perfect ground will read 36 ohms at the feed point.

--

Yours Truly,

- Karl F. Larsen, (505) 524-3303 -

-----  
Date: Wed, 17 Jul 2002 21:32:49 -0500  
From: Nick Kennedy <nkennedy@tcainternet.com>  
To: "'WD8CIV@worldnet.att.net'" <WD8CIV@worldnet.att.net>,  
Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>  
Subject: [129925] RE: stacked toroids  
Message-ID: <01C22DD9.80B824A0.nkennedy@tcainternet.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"  
Content-Transfer-Encoding: 7bit

Hard to resist trying this one, if you've got the little meter. I sure expected to get twice the inductance.

Maybe you get what you expect. With 10 turns on one FT-50-61, I got 7.86 uH. With 10 turns on two FT-50-61s, I get 15.23 uH. The ratio is 1.94.

One formula I see for inductance is  $N \cdot \Phi / I$ , or number of turns times flux divided by amps.

Seems like B (flux density) in a toroid is permeability times ampere-turns. So if you double up on the cores and keep the # of turns and the amps the same, B will be the same. But phi (flux) is B (flux density) times cross-sectional area, which has doubled. So phi doubles for the same number of turns and same current. Substituted into the formula for  $L = N \cdot \Phi / I$ , you can see that L doubles.

Did I do that right?

72--Nick, WA5BDU

-----Original Message-----

From: David Hinerman [SMTP:WD8CIV@worldnet.att.net]  
Sent: Tuesday, July 16, 2002 4:01 PM  
To: Low Power Amateur Radio Discussion  
Subject: stacked toroids

Folks,

What effect does stacking powdered-iron toroids have on the inductance per turn?

-----  
Date: Tue, 16 Jul 2002 20:43:22 -0600 (MDT)  
From: "Karl F. Larsen" <k5di@zianet.com>  
To: ss lyon <sslyon@megalink.net>  
Cc: Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>  
Subject: [129926] Re: Noise Bridge... oooops!  
Message-ID: <Pine.LNX.4.44.0207162041120.3992-100000@Daisy.dog>  
MIME-Version: 1.0  
Content-Type: TEXT/PLAIN; charset=US-ASCII

Thanks Seabury, sounds like an interesting kit. I will look at the web page. Surely there's no case provided for \$17 is there?

On Wed, 17 Jul 2002, ss lyon wrote:

> I said NN1G Noise Generator (all those 'n's & 'g's) and meant to say NOISE  
> BRIDGE. Sorry for the confusion.  
> -but I am the supplier -if I don't keep making these goofs!  
> 72  
> AA1MY  
> Seabury & Sharon Lyon  
> 99 Sparrowhawk Mtn Rd  
> Bethel ME, 04217 U.S.A.  
> 207-836-2576  
>  
> Virus Protection by Norton and ZoneAlarm  
>  
>

--

Yours Truly,

- Karl F. Larsen, (505) 524-3303 -

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Date: Tue, 16 Jul 2002 19:59:41 -0700  
From: <bowerm@ix.netcom.com>  
To: qrp-l@lehigh.edu  
Cc: qrp-l@lehigh.edu  
Subject: [129927] Re: KIT: the 'Rock-mite'  
Message-ID: <Springmail.0994.1026874781.0.71575200@webmail.pas.earthlink.net>

Rod, wait. Don't go in the corner. If you make the mistakes, we don't have to. This is TEAM work. You make the mistakes, we get to harass you. Didn't you hear about that yet?

Oh, wait. You're in the corner. You probably didn't hear us.

<VBG><VBG><VBG>

On Tue, 16 Jul 2002 19:41:15 -0600 Rod N0RC <rod@n0rc.us> wrote:

Excuse me, what was I thinking?!? The absorptive bridge of the BLT works just fine with the Rock-Mite!

I had the switch in the wrong position, I hate it when I do that!

If anybody wants me, I'll be in the corner, staring at the wall,

thinking about how dumb my claim was, embarrassed....

73, Rod N0RC .....sigh...

----- Original Message -----

From: "Rod N0RC" <rod@n0rc.us>

To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>

Sent: Tuesday, July 16, 2002 7:12 PM

Subject: Re: KIT: the 'Rock-mite'

> Michael, et.al.,

>

> Another possibility is the NorCal BLT, still available I believe. I

> just tried my BLT with my Rocky Mountain "Rock-Mite". Seems to work

> fine. I did have to tune-up with my MFJ-259, then attach the

> Rock-Mite. The absorptive bridge/swr indicator of the BLT doesn't seem

> to work with 400-500 mWatt input. Does anybody know of a way to

> increase the sensitivity of the BLT tuning indicator?

-----  
Date: Tue, 16 Jul 2002 21:15:12 -0600

From: "James R. Duffey" <jamesd1@flash.net>

To: Bill Coleman <aa4lr@arrl.net>,

Low Power Amateur Radio Discussion <qrp-1@lehigh.edu>

Subject: [129928] Re: Radial Lengths (long, was dipping traps)

Message-ID: <B95A3D60.19336%jamesd1@flash.net>

Mime-version: 1.0

Content-type: text/plain; charset="ISO-8859-1"

Content-transfer-encoding: quoted-printable

Bill - Thanks for your well thought out comments.

First of all, more radials are needed when the soil has good conductivity, rather than fewer. As I said, this is counter intuitive, but you can check Severn, Brown, or W8JI for confirmation of this. The numbers I posted also bear this out. A simple way to think of this: the purpose of radials is to provide a return current to the antenna by collecting the currents induced in the ground by the antenna. As you pointed out, the radials can only collect current within a certain distance. With good soil there are current=  
s

out past that distance that can be gathered if an additional radial is inserted between the two that are already there. It is a real effect and I am sorry that I cannot convey it better descriptively. I believe that the calculations show the truth.

The ground loss varies away from the quarter wave vertical roughly as follows:

Distance (wavelengths) from base of quarter wave high vertical	Relative Ground Loss	Relative Current Density
0	1	1
0.025	0.5	0.7
0.05	0.33	0.57
0.075	0.25	0.5
0.1	0.2	0.45
0.125	0.17	0.41
0.15	0.14	0.37
0.2	0.11	0.33
0.25	0.08	0.28
0.3	0.06	
0.35	0.04	
0.4	0.03	

The relative loss numbers are from Lee, "The Amateur Radio Vertical Antenna Handbook", CQ publications. I calculated the relative current density numbers by taking the square root of the loss numbers. These appear to be derived from Brown's original work.

Note that the highest loss is very close to the antenna; the loss has dropped to 0.2 of the initial value at 0.1 wavelength. This points out the importance of having lots of radials close to the antenna. Half the ground loss occurs within 0.05 wavelengths of the antenna! It is important to have radials spaced no further than the criteria, 0.02 for me, 0.025 or 0.05 for you, in this region.

As soon as I locate the July 2000 QST or find the original Brown articles, I can get better numbers to you.

But for now, I think I can prove the principle, if not the exact numbers.

Suppose we have 4 quarter wave radials as you suggest for a minimum amount of wire. Then if we do a quick and dirty numerical integration of the current density from 0 to 0.25 wavelengths (length) and 0.025 width (I am using your numbers for sake of one less argument), then the total current collected by the 4 radials will be:



$$I_{total} = 3D \text{ (Number of radials)} \times (\text{width over which currents are gathered}) \times (\text{radial increment}) \times (\text{sum of current densities at center of the radial increment})$$

so

$$I_{total} = 3D \ 4 \times (0.025) \times (0.025) \times (0.85 + 0.7 + 0.64 + 0.57 + 0.56 + 0.475 + 0.45 + 0.43 + 0.41 + 0.39 + 0.37 + 0.35 + 0.33)$$

$$I_{total} = 3D \ 0.016 \text{ for 4 quarter radials.}$$

Now, suppose we cut off the outer half of the 4 radials and put them between the 4 radials so that we now have 8 radials that are 0.125 wavelengths long.

Now the new current gathered by the radials will be:

$$I_{total} = 3D \ 8 \times (0.025) \times (0.025) \times (0.85 + 0.7 + 0.64 + 0.57 + 0.56 + 0.475 + 0.45) = A0 = 3D \ 0.849$$

which is a significant improvement, considering that the power loss goes as the current squared, so the ratio of losses between the two cases is  $A0(0.021/0.016)^2 = 3D \ 1.7$

So by using the same amount of wire, but with less radial length, the amount of ground current collected by the radials is increased, and so is the amount of signal radiated.

One can repeat this process of shortening the radials until shortening the radials makes little difference in the ratio. This will occur when the circumferential spacing is the optimum, either 0.02, 0.025, or 0.05 depending on the soil conductivity or personal preference.

As I said these are rough numbers, only intended to prove a tendency that more shorter radials will out perform fewer longer ones.

I will try to get better numbers soon, perhaps over the weekend. In the meantime this does show the trend. More to follow. I hope that this helps. - Dr. Megacycle KK6MC/5

--=20

James R. Duffey KK6MC/5

Cedar Crest, NM DM65

-----  
Date: Tue, 16 Jul 2002 21:20:08 -0600  
From: "James R. Duffey" <jamesd1@flash.net>  
To: "Karl F. Larsen" <k5di@zianet.com>  
Cc: Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>  
Subject: [129929] Re: Radial Lengths (long, was dipping traps)  
Message-ID: <B95A3E88.19338%jamesd1@flash.net>  
Mime-version: 1.0  
Content-type: text/plain; charset="US-ASCII"  
Content-transfer-encoding: 7bit

Karl - Sorry to make the discussion so long and difficult, but I did not have the time to make it shorter and simpler.

You are right, if one elevates the radials then one can get away with fewer of them, but it is necessary that they be resonant. This is best achieved by treating them in pairs and resonating them as dipoles. It also helps to shorten them somewhat by either inductive loading or by folding them over on themselves. This reduces radiation from the radials if there is a mismatch in electrical length. - Dr. Megacycle KK6MC/5

--  
James R. Duffey KK6MC/5  
Cedar Crest, NM DM65

-----  
Date: Tue, 16 Jul 2002 23:23:47 -0400  
From: David Hinerman <WD8CIV@worldnet.att.net>  
To: qrp-l@lehigh.edu  
Subject: [129930] RE: stacked toroids  
Message-ID: <5.1.0.14.1.20020716231854.00b1d308@postoffice.worldnet.att.net>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"; format=flowed

At 09:32 PM 7/17/2002 -0500, you wrote:  
>Maybe you get what you expect. With 10 turns on one FT-50-61, I got 7.86  
>uH. With 10 turns on two FT-50-61s, I get 15.23 uH. The ratio is 1.94.  
>  
>One formula I see for inductance is  $N \cdot \Phi / I$ , or number of turns times flux  
>divided by amps.  
>

>Seems like B (flux density) in a toroid is permeability times ampere-turns.  
> So if you double up on the cores and keep the # of turns and the amps the  
>same, B will be the same. But phi (flux) is B (flux density) times  
>cross-sectional area, which has doubled. So phi doubles for the same  
>number of turns and same current. Substituted into the formula for  $L =$   
> $N \cdot \Phi / I$ , you can see that L doubles.  
>  
>Did I do that right?

Nick,

You're asking the wrong guy - I do software for a living. We have a guy  
locked in a padded cell at work that we let out now & then to do our magnetics.

But I notice you're experimenting with ferrites, while Tracy did his with  
powdered iron. Perhaps there's more "efficiency" with the higher  
henries-per-turn of ferrites.

Dave

-----  
"You can fool some of the people all of the time. That's enough to make a  
living." - Lance Burton  
-----

Dave Hinerman  
WD8CIV@att.net

-----  
Date: Tue, 16 Jul 2002 22:28:07 -0500  
From: Dave Hottell <hottell@gulftel.com>  
To: aa4lr@arrl.net,  
"Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>  
Subject: [129931] Re: Artificial RF Ground NO!  
Message-ID: <3.0.6.32.20020716222807.008a1eb0@pop.gulftel.com>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

Bill and the group,

At 09:16 PM 7/16/02 -0400, Bill Coleman wrote:

>On 7/2/02 11:26 AM, Karl F. Larsen at k5di@zianet.com wrote:

>

>>The proper length is found from the formula that gives the  
>>length of a 1/2 wave which is  $468/f(\text{MHz})$  so the counterpoise wants to be

>>half that length or  $(468/f(\text{MHz}))/2$ . On my calculator that cost \$10.00 15  
>>years ago a counterpoise for 7.040 MHz will be 33.2 feet long. You can  
>>calculate the other frequencies yourself.  
>  
>Uh, well, yes and no.  
>  
>The formula  $468/f$  is for a dipole in feet. Note that this is somewhat  
>shorter than the formula for 1/2 wave in free space ( $492/f$ ). Just shy of  
>5% shorter.  
>  
>The reason for the shortening is two fold. First, you have to consider  
>the velocity factor of the wire, because the electrical current doesn't  
>quite travel at the speed of light. This is around 1%. Second, the ends  
>of the wire have considerable capacitive coupling to the insulators. This  
>capacitive effect ends up contributing the remainder.  
>  
>So, for a counterpoise, I would start with the  $492/f$  formula, just so you  
>don't end up shortchanged. And that would be 34.9 feet. You can always  
>cut more off if you have to.  
>

Actually, it gets a little trickier than that. That is, if you want a resonant counterpoise. I am not at all sure that this matters, but just FYI, as a wire gets closer to the ground the resonant freq. falls. I recently measured my G5RV Jr. (52' of #14 wire) at different heights, here are the readings:

Height	fo	SWR	Z
7 ft	9.1	1.2	58-j5
9 in	8.5	1.9	94-j14
1 in	6.3	3.7	118-j78

The height of the last reading is my best guess, the wire was actually lying on the grass. The fo at 7' agrees with the  $468/f$  formula. I did this to see what length of counterpoise I thought I would run during FD with my K1.

If you are planning on running your counterpoise outside, directly on the grass, and you want it to be resonant, you may want to cut it a little shorter than the formula. If you're going to use it in a second floor apartment, then the formula is probably pretty close.

I'm not sure exactly what this means except that the fo drops due to detuning by the earth. The proximity to the earth affects the velocity factor? Capacitive coupling? Maybe one of the resident antenna gurus can comment.

FWIW, EZNEC predictions for this wire are pretty close. About a 5 ohm error at 7' with fo dead on, about 10 ohms at 9" with fo very close. The last one though is tough because EZNEC tells that varying the height just a little when so close to ground will have a significant impact on the impedance and fo. Go up or down 1/2" and the fo will shift by a few hundred KHz. Since I didn't measure the height to the closest 1/8" I can't make a comparision there. <g>

73,  
Dave  
ab9ca

>  
>  
>Bill Coleman, AA4LR, PP-ASEL           Mail: aa4lr@arrl.net  
>Quote: "Not within a thousand years will man ever fly!"  
>           -- Wilbur Wright, 1901  
>  
>

-----  
Date: Tue, 16 Jul 2002 21:35:53 -0600  
From: "James R. Duffey" <jamesd1@flash.net>  
To: <alihernlem@hotmail.com>, qrp-l <qrp-l@lehigh.edu>  
Subject: [129932] Re: 2N5564 good at RF  
Message-ID: <B95A4239.1933D%jamesd1@flash.net>  
Mime-version: 1.0  
Content-type: text/plain; charset="US-ASCII"  
Content-transfer-encoding: 7bit

Brad - It appears from my old Siliconix data book that these are good at RF. They quote a transconductance at 100 MHz of 7000, down from 7500 at 100 kHz.

In the selection charts they also list these as a secondary preference for mixers. I also suspect that they would also make a good cascode IF amp.

If you don't have a data sheet, I would be willing to supply you one; perhaps in exchange for a few of these dual FETs? I have my own project in mind. - Duffey

--  
James R. Duffey KK6MC/5  
Cedar Crest, NM   DM65

-----

Date: Tue, 16 Jul 2002 21:40:58 -0600  
From: "James R. Duffey" <jamesd1@flash.net>  
To: <qrp-1@lehigh.edu>  
Subject: [129933] Re: Rock-Mite Mod #1  
Message-ID: <B95A436A.1933F%jamesd1@flash.net>  
Mime-version: 1.0  
Content-type: text/plain; charset="US-ASCII"  
Content-transfer-encoding: 7bit

Gee Chuck (and Dave) - I want one for 30 M, the queen of all QRP bands. I am surprised that you don't want one for this band as well. What is involved in changing bands? Also, are the component voltage ratings such that one can operate from 2 9V bateries, 18 V total, to get a bit more power? I will supply my own final heatsink. - Dr. Megacycle KK6MC/5

--

James R. Duffey KK6MC/5  
Cedar Crest, NM DM65

-----  
Date: Tue, 16 Jul 2002 22:46:31 -0500  
From: "Jay Bromley" <w5jay@alltel.net>  
To: <tentec@contesting.com>  
Cc: <qrp-1@lehigh.edu>  
Subject: [129934] Re: [TenTec] SALE: Irad filters for Ten Tec  
Message-ID: <01b801c22d44\$8acb4ac0\$6518150a@Alltel>  
MIME-Version: 1.0  
Content-Type: text/plain;  
                charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Thanks guys the Inrads are gone.

73 de w5jay..

-----  
Date: Tue, 16 Jul 2002 22:48:56 -0500  
From: "Jay Bromley" <w5jay@alltel.net>  
To: <tentec@contesting.com>  
Cc: <qrp-1@lehigh.edu>  
Subject: [129935] Re: tentec filters  
Message-ID: <01c401c22d44\$e10dcfc0\$6518150a@Alltel>

MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Thanks gang the TenTec filters are gone.

Thank you and 73 de w5jay..

-----  
Date: Tue, 16 Jul 2002 21:10:21 -0700  
From: Jason <kc7eip@shaw.ca>  
To: nwq-1@scn.org, qrp-1@lehigh.edu  
Subject: [129936] 5 watt Smk-1 mod....Pixie II  
Message-ID: <000701c22d47\$dea0c000\$9d094d18@gv.shawcable.net>  
MIME-version: 1.0  
Content-type: text/plain; charset=Windows-1252  
Content-transfer-encoding: 7BIT

I was wondering if anyone has successfully ported the smk-1 5watt mod for use over to the pixie II on 40 meters?

-----  
Date: Tue, 16 Jul 2002 22:30:09 -0600  
From: "Brian P. Mileschosky" <n5zgt@swcp.com>  
To: <qrp-1@lehigh.edu>  
Subject: [129937] Aftermarket HT Batteries - THANKS  
Message-ID: <003f01c22d4a\$a6cd56e0\$7900b8d8@hlw11>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Hi All,

Thank you all for your comments on who to deal with when buying aftermarket HT batteries. I really appreciate it!

73,  
Brian, N5ZGT

-----  
Amateur Radio Station N5ZGT - N5ZGT PBBS, 145.01 MHz  
ARRL Life Member, NorCal #1700 QRP-L #580 AK/QRP #125

Boy Scouts of America - Eagle Scout 12/6/96 - ASM, Troop 85  
Vigil Honor Member, O.A. Lodge 66 Yah-Tah-Hey-Si-Kess

Please visit my site at <http://www.unm.edu/~brianm>

---

---

Date: Wed, 17 Jul 2002 04:56:28 +0000  
From: "Dennis Ponsness" <wb0wao@hotmail.com>  
To: qrp-1@lehigh.edu  
Subject: [129938] Re: KIT: the 'Rock-mite'  
Message-ID: <F115JGpwb7LU0RcWk0u00015026@hotmail.com>  
Mime-Version: 1.0  
Content-Type: text/plain; format=flowed

Michael wrote:

>Any chance that NJQRP will do another run of the Rainbow tuner kit for  
> >those of us who missed out?

I will second that! I missed out on the second run as well!

Dennis - WB0WAO

NJQRP #329  
FPQRP #-347  
SOC #499  
FISTS # Pending  
GACW #622

---

MSN Photos is the easiest way to share and print your photos:  
<http://photos.msn.com/support/worldwide.aspx>

---

---

Date: Tue, 16 Jul 2002 23:40:56 -0600  
From: "Brian P. Mileschosky" <n5zgt@swcp.com>  
To: <qrp-1@lehigh.edu>  
Subject: [129939] Albuquerque Duke City Hamfest  
Message-ID: <001101c22d54\$8a03c1c0\$0800b8d8@hlw11>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"



Content-Transfer-Encoding: 7bit

Fellow QRPers,

The 2002 Albuquerque Duke City Hamfest and ARRL NM Section Convention will take place on Friday August 23 thru Saturday August 24th! I know many QRPers live inside or near New Mexico, and wanted to extend an invitation to those who might be interested in a road trip to beautiful Albuquerque. The site is conveniently located right next to the I-25 and I-40 interchange, at the University of New Mexico Conference Center. RV camping will take place next door to the hamfest, and there are hotels & motels all over the area.

To the folks heading to Ft. Tuthill this year -- spread the word! MUCH more detailed information can be found at [www.qsl.net/dchf](http://www.qsl.net/dchf), including downloadable flyers.

Come one, come all!

72,  
Brian, N5ZGT

---

Amateur Radio Station N5ZGT - N5ZGT PBBS, 145.01 MHz  
ARRL Life Member, NorCal #1700 QRP-L #580 AK/QRP #125

Boy Scouts of America - Eagle Scout 12/6/96 - ASM, Troop 85  
Vigil Honor Member, O.A. Lodge 66 Yah-Tah-Hey-Si-Kess

Please visit my site at <http://www.unm.edu/~brianm>

---

-----

Date: Wed, 17 Jul 2002 01:05:46 -0500  
From: Ade Weiss W0RSP <[adeweiss@sd.value.net](mailto:adeweiss@sd.value.net)>  
To: [qrp-l@lehigh.edu](mailto:qrp-l@lehigh.edu)  
Subject: [129940] Re: Radial Lengths (long, was dipping traps)  
Message-ID: <1T2WA8431VZUSNLFRPFE95KI41B905TP.3d35093a@aweiss>  
MIME-Version: 1.0  
Content-Type: text/plain; charset="windows-1252"

Hi all:

Interesting thread. I've saved most of it.

However, I must note one slightly flawed assumption about 0.25 wavelength radials.

When placed on the ground, a "free-space" or elevated 0.25 wavelength wire is nowhere near to being a 0.25 wavelength wire.

The term "Quarterwave radial" applies only to elevated wires (height depends up freq.)

When you have time, drop your dipole onto the ground and then take an R/X reading and you'll understand my point.

On dipping traps, you have to take the trap out of the antenna and then dip it.

72, Ade

-----  
Date: Wed, 17 Jul 2002 07:57:46 -0100  
From: Bill Meara <n2cqr@clix.pt>  
To: qrp-l@lehigh.edu  
Subject: [129941] 17 Birdies killed!  
Message-ID: <1.5.4.32.20020717085746.0070805c@pop.clix.pt>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

This was one of the most satisfying technical resolutions I ever made.

After thinking about my birdie problem for some time, I concluded that the culprit was harmonics from the carrier oscillator.

Last night I looked at the schematic of the Pierce carrier oscillator. There is a 33 pf cap to ground from the junction of the crystal and the transistor base. I figured that by increasing the value of this cap I could decrease the amount of feedback energy in the circuit.

I soldered in a 30 pf compression trimmer right over the original 33 pf cap.

I turned on a receiver and listened to the second harmonic of the carrier oscillator. Sure enough, as I increased the value of the trimmer cap, the strength of the harmonic decreased very significantly. But the 5.176 fundamental was still strong.

Quickly I checked to see if the hated birdies were still there. They were completely gone!

Now instead of being trapped on the upper portion of the band, my tuning range has expanded to a full 40 khz.

Thanks to all who offered suggestions and encouragement.

73

73 de Bill CU2JL N2CQR  
Sao Miguel Island, Azores, Portugal  
900 miles West of Lisbon 37.7N 25.67W  
<http://planeta.clix.pt/n2cqr>

-----  
Date: Wed, 17 Jul 2002 09:58:59 +0000  
From: "Leon Heller" <leon\_heller@hotmail.com>  
To: alihernlem@hotmail.com, qrp-l@lehigh.edu  
Subject: [129942] Re: 2N5564 good at RF?  
Message-ID: <F100zadTMVwVn20lbhs00000167@hotmail.com>  
Mime-Version: 1.0  
Content-Type: text/plain; format=flowed

>From: "Brad Hernlem" <alihernlem@hotmail.com>  
>Reply-To: alihernlem@hotmail.com  
>To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>  
>Subject: 2N5564 good at RF?  
>Date: Tue, 16 Jul 2002 21:52:42 +0000

>

>Do these dual matched N-channel JFETs have any RF application? I've got a  
>few hundred of them. Am wondering whether they would do well for FET probe  
>use or other RF application. Anyone familar with these?

>

I built an FET voltmeter many years ago with a matched pair of similar devices. It worked very well with a diode probe. Might have been the same FETs; they were TI, and came with a clip holding them together. I think they were actually matched 2N3819s.

73, Leon

--

Leon Heller, G1HSM Tel: +44 1327 359058 Email:leon\_heller@hotmail.com  
My web page: [http://www.geocities.com/leon\\_heller](http://www.geocities.com/leon_heller)  
My low-cost Altera Flex design kit: <http://www.leonheller.com>

-----  
Chat with friends online, try MSN Messenger: <http://messenger.msn.com>

-----  
Date: Wed, 17 Jul 2002 06:14:36 -0400 (EDT)  
From: George Gingell <k3tks@u1.abs.net>  
To: QRP List <qrp-l@lehigh.edu>  
Cc: "Bill (Tejas Kits) Hickox" <k5bdz@aol.com>,  
G-QRP Club E-mail Reflector <gqrp@onelist.com>  
Subject: [129943] Re: QRP Excellance  
Message-ID: <20020717053326.U65367-1000000@u1.abs.net>  
MIME-Version: 1.0  
Content-Type: TEXT/PLAIN; charset=US-ASCII

I am pleased to add a hearty Second to the fine work of George Heron and all of his able assistants in the NJ-QRP Club. Sixty (60) Pages of QRP Excellance.

Lets see, \$ 15.00 less about \$ 1.50 Postage per issue leaves \$ 10.00 for 4 issues divided by the pages (60), comes out to about \$ .04 per page.

Man than Ain't Good Value, That's FREE!

I know Joe already gave the Website info. <[Http:\\www.njqrp.org](http://www.njqrp.org)> But I thought that I would add a couple of Shameless tid bits as well.

Yes, You can subscribe right off the website. Yes, You can pay via PayPal.

Actually that is the preferred method, although George will accept checks or Mo's payable to "George Heron, N2APB" and mail them to him at 2914 Feather Mae Court, Forest Hill, MD 21050.

or... Send payment electronically to [n2apb@amsat.org](mailto:n2apb@amsat.org) via PayPal.

Domestic Subscriptions (US & Canadian Addresses) are \$ 15.00 per year. DX Subscriptions are \$ 20.00 per year. Subscriptions are available for either 1 or 2 years.

Here is a copy of the Table of Contents for the Current issue #8 April 2002.

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Page 57 is my personal Favorite;

SOP Receiver Kit, W1CG Balun Kit, K8IQY Precision VX0, HC908 Daughter Board, Badger Smartbadge keyer, Island Pad Cutter, N2CAU, Tip Tapper Iambic Paddle, PSK31 Audio Beacon, NC2X Halfer Antenna, NK0E Serial Sender Kit (Use the Palm & GoLog with your rig for QRPP Contest Station) !!!  
OH! Yes, and Atlanticon Proceedings 2001 & 2002.

I am working my way down the List myself. All are Winners. And i might add that there is more to come.

Not only that, but George also does a fine job with "Digital QRP Homebrewing" Column in the QRP ARCI Quarterly Journal.

Now you see why I VOTED for Him in the HOF.

Let's each help a little here and there where we can.

How can a guy with so much hair be so smart? :^}

QRPP Dx Tu, (C) 2002 K3TKS

Sir George, The First :^}

72 ES QRP DX TU (C) 1986, G. "Danny" Gingell, K3TKS@ abs.net  
Former QRP A.R.C.I. Net Manager and CURRENT Board of Director Member.

Gingell & Company, Ltd. Small Business Telephone Systems, Handyman Services,  
Commercial & Residential Locksmith Services (301) 572-6789 Office & Fax  
George D. Gingell, Jr. 3052 Fairland Road, Silver Spring, MD 20904-7117  
Maryland Milliwatt Club QRP Reference Library, (301) 572-6789 IQRR #1,  
Maryland Milliwatt Club Founder and Trustee of Club Station - WQ3RP -  
Grid Square FM19mb 76.94 W - 39.06 N Silver Spring, MD 20904 QRPea.A.

Collector of Quartz Crystals and Telegraph Keys.

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-----  
Date: Wed, 17 Jul 2002 06:49:11 -0400 (EDT)  
From: George Gingell <k3tks@u1.abs.net>  
To: QRP List <qrp-l@lehigh.edu>  
Subject: [129944] Re: Battery Charging  
Message-ID: <20020717061452.S65367-100000@u1.abs.net>  
MIME-Version: 1.0  
Content-Type: TEXT/PLAIN; charset=US-ASCII

First Off, Lets' Start with a bit of WARNING! Those GATES CYCLON Cells are nothing to be Careless Around. They are probably the very best and most powerfull Gel Cells known to man. PUT A FUSE or FUSE LINK at the Terminal post.

We once saw a "D" sized Cell thrown on the bench, shorting the terminal and Exploding. How about about 100 AMPS for a Second or So. All Hell breaks loose. Lucky, No one was real close.

I went right home and took my CW Keyboard apart and added Fuses right on the terminals. I had two seperate 12V Packages in it. One for the Keyboard and One for the Rig.

The Ones in the Battery Mentioned by Bill are "BIG Brothers to the "D" Cell" About 2X or 3X at least. The Plates are Spirally Wrapped and have Holes in them. Real nice Batteries if used properly.

On another somewhat related comment read earlier. It referred to Never Quick Charging NiCads. I hate to disagree, but the fellows in Model RC Planes and Cars have been Quick Charging them for years.

I saw a really good video one year over at the Columbia MD RC Club Event at the Mall. It was about an hour long and described everything you ever wanted to know about Nicads and Charging them. One particular SMART Charger uses a Temperature Sensing Probe placed next to the Outer Shell Casing to keep track of the Cell Temperature. Basically, they Pulse Charge the Hell out of it til it Gets HOT and then Shut off the Juice.

Then there is the Cordless Drill Charger. My Makita (12V) Charger will recharge the battery pack in 1 HR or Less.

I am also told that the new NIMH Chargers will also Charge the old Nicads.

I'll have to check that out the next time I buy a new Drill Kit.

All of the Major Tool Manufacturers are going to the NIMH Batteries now.

I was told recently that thje 9.6 V battery will work my old 12v drill, just not quite as much torque. However, It will run longer due to the characteristics of the NIMH Cells.

How is this QRP Related? Well the reason that bought the 12V Tools in the first place was the fact that I could also use the Battery Packs to run my QRP Gear in an Emergency. Got an Old Makita Drill with a 12V Pack? What ever you do, don't throw it away. Cut the Handle off and build a QRP rig in it. Don't Throw the Defective Batteries Away. Take them out of the Case and Deposit the bad Cells in the Battery Bin at your Local Home Depot or other fine Hareware Emporium.

You can buy new cells and put them in the old case. OBTW a new 12V Nicad Battery Pack is \$ 52.00 List. Guess What, You can buy a Brand New 9.6V NIMH Makita Drill and 2 Battery Packs for about \$ 100.00 at COSTCO.

And that included the Charger!

Want 12V ? Same Story. 14.4 Drill Package might be even better for the QRP to the Field Gang. My Next Project is to Carve a Pomona Box to Accept a New 14.4 NIMH Drill Battery Package. Then Mount it in the top of a length of 3" or 4" PVC Pipe. Probably only have to recharge the QRPP Beacon about Once a Year?

Yes, I am still hung up on those little QRPP Beacon Projects.

I did get my Flag Pole up this Summer, But I still don't have the QRPP LightHouse ready yet. Still have to make a 3" Round PCB for the "Badger Keyer" (NJQRP Kit).

That's it folks, It is long past O'Dark 30 here now. Hmmm I'll say, looks

more like 7 bells...

BIG BEN is Calling...

GMTU

QRPP Dx Tu, (C) 2002 K3TKS

Sir George, The First :^}

72 ES QRP DX TU (C) 1986, G. "Danny" Gingell, K3TKS@ abs.net  
Former QRP A.R.C.I. Net Manager and CURRENT Board of Director Member.  
Gingell & Company, Ltd. Small Business Telephone Systems, Handyman Services,  
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-----  
Date: Wed, 17 Jul 2002 06:11:36 -0500  
From: "Jim" <sunwatt@starband.net>  
To: "QRP-L" <qrp-L@lehigh.edu>, <elecraft@mailman.qth.net>  
Subject: [129945] K2 working PACTOR @ 5 watts  
Message-ID: <003301c22d82\$bb2137f0\$d25a3f94@presario>  
MIME-Version: 1.0  
Content-Type: text/plain;  
                charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

The recent article in QST about PACTOR, and the Airmail program caught my eye. And my ISP filed for Chapter 11, so there is a real chance I might lose my email, so seemed like the time was right to have a go at this.

With encouragement from my friend Bob N9ZZ I started looking for a TNC that would do PACTOR. What I found was a AEA PK-232MBX, for \$65.

It was ruff going at 1st but now I can connect to one of the PACTOR WL2K



stations about 90% of the time with my K2, running 5 watts.

The system is not perfect, but like I said I'm able to use it so I won't complain too much!

72's de Jim KJ5TF K2 # 702

-----  
Date: Wed, 17 Jul 2002 05:26:37 -0600 (MDT)  
From: "Karl F. Larsen" <k5di@zianet.com>  
To: Ade Weiss W0RSP <adeweiss@sd.value.net>  
Cc: Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>  
Subject: [129946] Re: Radial Lengths (long, was dipping traps)  
Message-ID: <Pine.LNX.4.44.0207170522380.1624-100000@Daisy.dog>  
MIME-Version: 1.0  
Content-Type: TEXT/PLAIN; charset=US-ASCII

Hi Ade. Your point on 1/4 wave radials is well made. On my roof at 12 feet above actual ground the radials are pretty close to the half dipole length. You can put a amp meter in each leg near the feedpoint and trim them to max current while transmitting...but I don't know how to do this.

On Wed, 17 Jul 2002, Ade Weiss W0RSP wrote:

> Hi all:  
>  
> Interesting thread. I've saved most of it.  
>  
> However, I must note one slightly flawed assumption about 0.25 wavelength radials.  
>  
> When placed on the ground, a "free-space" or elevated 0.25 wavelength wire is  
> nowhere near to being a 0.25 wavelength wire.  
>  
> The term "Quarterwave radial" applies only to elevated wires (height depends up  
> freq.)  
>  
> When you have time, drop your dipole onto the ground and then take an R/X  
> reading and you'll understand my point.  
>  
> On dipping traps, you have to take the trap out of the antenna and then dip  
> it.

>  
> 72, Ade  
>  
>  
>  
>  
>  
>

--

Yours Truly,

- Karl F. Larsen, (505) 524-3303 -

-----  
Date: Wed, 17 Jul 2002 06:19:37 -0500  
From: Wayne Rogers <w5kdj@juno.com>  
To: qrp-1@lehigh.edu  
Subject: [129947] Fw: Major Solar Flare prompts an Aurora Watch  
Message-ID: <20020717.061937.-396329.0.w5kdj@juno.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Wayne\_W5KDJ  
Spring, Texas  
ex-SV0WWW & TF2WJN

A s t r o A l e r t  
Sun-Earth Alert

Solar Terrestrial Dispatch  
<http://www.spacew.com>

16 July 2002

<http://www.spacew.com/astroalert.html>

X-CLASS SOLAR FLARE ALERT

Confirmed naked-eye active sunspot complex 10030 produced a major  
class  
X3 x-ray proton flare on 15 July at 20:08 UTC (4:08 pm EDT). A  
significant

and fairly high velocity coronal mass ejection was associated with this event. Most of the ejected mass appears to have been directed north and east of the Earth. However, there was a discernable halo in SOHO LASCO imagery, which means at least a portion of the CME is directed Earthward.

This sunspot complex is visible almost in the center of the solar disk as of 16 July. As the days progress, it will gradually rotate toward the western side of the solar disk. It is visible with naked-eye protection and will likely remain visible for the next several days before limb foreshortening takes its toll.

This spot complex has experienced considerable growth over the last few days. Minor decay has been observed in the central portion of the spot complex today, but the more significant trailer portion has continued to grow and maintain a significant degree of magnetic complexity. There are multiple areas of this region where opposite polarity umbrae are enclosed within a single penumbra (a special and often violently unstable magnetic configuration known as a "delta"). This may aid in the development of additional energetic solar flare events from this spot complex.

Should additional significant activity occur, there is a high probability the near-Earth space environment would be bathed in streams of energetic solar protons. Although these energetic particles can pose a health risk to astronauts in orbit, they often pose a greater challenge to spacecraft in higher or transpolar orbits where energetic proton densities can become significant enough to produce spurious anomalies and phantom commands on these spacecraft. These space radiation storms do not pose a health hazard to humans on the Earth. The Earth's magnetosphere and ionosphere do a marvelous job shielding us from harmful effects.

Solar observers are encouraged to keep a close eye on this spot complex for possible white-light solar flare activity. Please report any confirmed white-light flare sightings to: [STD@Spacew.Com](mailto:STD@Spacew.Com) (if possible, please include an image of the event to help confirmation). Pay particular attention to the

trailer portion of the spot complex.

#### POSSIBLE MID-LATITUDE AURORAS OVER THE NEXT SEVERAL DAYS

The ejected mass from the 15 July energetic coronal mass ejection is expected to impact the Earth sometime on 17 July and persist through at least part of 18 July. Periods of minor to major auroral substorm activity may develop in association with this CME impact. Widespread middle latitude observations of auroral activity may be possible on these dates.

The activity most likely will not be as strong as the events following the famous Bastille Day flare on 14 July 2000 (which occurred in a spot complex not too dissimilar from the current sunspot complex). However, the potential exists for occasional respectable levels of activity. Whether a specific region (i.e. "your region") observes auroral activity is very heavily dependent upon when the disturbance arrives and whether "your" region is on the dark side of the Earth or not. Your best chances are to stay informed over the coming days. Current and updated conditions are made available at: <http://www.spacew.com/aurora/forum.html> (in particular, refer to the current forecast conditions at the bottom of this page).

A copy of the middle latitude auroral activity watch that has been issued for this event is included below.

/\

#### MIDDLE LATITUDE AURORAL ACTIVITY WATCH

WATCH ISSUED: 19:10 UTC, 16 JULY 2002

/\

VALID BEGINNING AT: 12:00 UTC 17 JULY  
VALID UNTIL: 19:00 UTC (3 pm EDT) ON 19 JULY

HIGH RISK PERIOD: 17 - 18 JULY (UTC DAYS)  
MODERATE RISK PERIOD: 17 - 19 JULY

PREDICTED ACTIVITY INDICES: 24, 35, 15, 12 (17 JULY - 20 JULY)

POTENTIAL MAGNITUDE OF MIDDLE LATITUDE AURORAL ACTIVITY: MODERATE

POTENTIAL DURATION OF THIS ACTIVITY: MAIN BELT = 12 HOURS

MINOR BELT = 12 TO 24 HOURS

ESTIMATED OPTIMUM OBSERVING CONDITIONS: NEAR LOCAL MIDNIGHT

EXPECTED LUNAR INTERFERENCE: MODERATE

OVERALL OPPORTUNITY FOR OBSERVATIONS FROM MIDDLE LATITUDES: FAIR

AURORAL ACTIVITY \*MAY\* BE OBSERVED APPROXIMATELY NORTH OF A LINE FROM...

OREGON TO SOUTHERN IDAHO TO WYOMING TO NORTHERN NEBRASKA TO IOWA TO  
ILLINOIS TO INDIANA TO OHIO TO PENNSYLVANIA TO NEW JERSEY.

ACTIVITY \*MAY\* ALSO BE OBSERVED APPROXIMATELY NORTH OF A LINE FROM...

IRELAND TO SOUTHERN ENGLAND TO NORTHERN BELGIUM TO CENTRAL GERMANY TO  
NORTH-CENTRAL POLAND TO NORTHERN BELARUS TO NORTHERN RUSSIA (ROUGHLY  
NORTH

OF A LINE FROM TVER TO YAROSLAVL TO SYKTYVKAR TO CENTRAL SIBERIA). NEW  
ZEALAND AND EXTREME SOUTHERN REGIONS OF AUSTRALIA MAY ALSO SPOT

PERIODS

OF

ACTIVITY.

SYNOPSIS...

A strong solar flare on 15 July has produced an Earthward directed  
coronal mass ejection. This disturbance is expected to impact the Earth  
and produce enhanced periods of auroral activity later on 17 July and  
lingering through 18 July. Although this disturbance may not be a  
particularly significant storm-bearing disturbance, it has the potential  
of

producing periods of substantially enhanced auroral activity over the  
high

and perhaps widespread middle latitude regions. Observers over North  
America

are encouraged to begin watching the sky and space weather conditions  
during

the local evening and early morning hours of 17 and 18 July. Impact of  
the

coronal mass ejection could occur anytime after the mid UTC day of 17  
July

(8

am EDT on 17 July). For current conditions, please visit:

<http://www.spacew.com/aurora/forum.html> (a link at the bottom of this

page  
provides current up-to-date information).

The active sunspot complex that was associated with this earthward directed CME may produce additional earthward directed CMEs over the coming days.

This watch will remain valid through 19:00 UTC (3 pm EDT) on 19 July.  
It will then be updated or allowed to expire. For updated information, visit:  
<http://www.spacew.com/aurora/forum.html>

PLEASE REPORT OBSERVATIONS OF AURORAL ACTIVITY TO:  
<http://solar.spacew.com/submitsighting.html>

Observations reported here are permanently recorded for future study and are immediately made available in real-time to a large network of observers world-wide via the Internet, e-mail and pager. If you observe activity, your assistance to contribute to this database would be appreciated.

A FREE trial of the space weather "SWIM" software package is now available at: <http://www.spacew.com/swim>. Use it to monitor current conditions. It may also be used to monitor any image resource you find on the Internet (including almost any type of 'cam' or "pictures of the day" you can find).

\*\* End of the AstroAlert Bulletin \*\*

-----

Date: Wed, 17 Jul 2002 07:05:51 -0500  
From: "Frank Emens" <[femens@hiwaay.net](mailto:femens@hiwaay.net)>  
To: [Qrp-1@lehigh.edu](mailto:Qrp-1@lehigh.edu)  
Subject: [129948] Two-Four-Six-Eight  
Message-ID: <3D35174F.12147.2653CB@localhost>  
MIME-Version: 1.0  
Content-type: text/plain; charset=US-ASCII  
Content-transfer-encoding: 7BIT  
Content-description: Mail message body

Some of the traffic posted in the last week leads me to think it is appropriate to

pass  
this handy mnemonic idea along to the group.

Everybody remembers the old high school cheer that starts out "Two-Four-Six-Eight-Who do We Appreciate (fill in name of school) Rah Rah Rah.

There's a valuable memory aid built into that.  $246/F$  where  $F$  is the frequency in MHz gives the length in feet of a quarter wave in free space.  $468/F$  gives the length in feet of a half wave dipole making normal allowances for end effect, etc.

I don't remember where I got this originally, probably some Elmer in the deep, dark past, but I've used it to good effect in teaching Novice classes. I don't think any of my students ever missed a question requiring knowledge of those two numbers.

--  
Frank Emens  
femens@hiwaay.net

-----  
Date: Wed, 17 Jul 2002 08:26:12 -0400  
From: John R Kirby <n3aaz-qrp@juno.com>  
To: qrp-1@lehigh.edu, QRPp-I@yahoogroups.com, GQRP@yahoogroups.com  
Subject: [129949] NOISE BRIDGE Info...  
Message-ID: <20020717.082618.-147227.1.n3aaz-qrp@juno.com>  
MIME-Version: 1.0  
Content-Type: text/plain  
Content-Transfer-Encoding: 7bit

The noise bridge  
measures reactance  $\{X(L) \text{ and } X(C)\}$  and  $R$   
using only an AM radio.

The noise bridge can also  
be used for antenna and feed line pruning.

This modulation technique can be added to  
The New England QRP club's Noise Bridge kit shown at  
<http://www.qsl.net/wq1rp/noisebrg.htm>

The modulated noise bridge EXTENDS the  
resolution  $\{\text{deeper nulls}\}$  (not the accuracy)  
of the noise bridge.

Note, NOTHING in this procedure is critical,  
including the heart of the circuit a transformer,  
wind your own or buy from MCL or whomever.

I built my MNB on a solderless poke board.

Original subject was  
Spice and the Noise Bridge (here on qrp-l).

To those interested enjoy : - )  
else (its a bit long) delete now ; -(

The block diagram and a "Quick es Dirty"  
calibration procedure are enclosed.

My objective . . .  
a hardware project (the NB) that would reinforce  
a software (SPICE) learning experience.

Conclusion . . .  
I am pleased,  
both work like gang busters.

#### Software:

1) The free version of WinSpice3,  
(suggested here on the list) works great,  
has a lot of models to choose from and gets the job done.  
Getting it up and running was not straight forward but  
I "was then" a newbie to SPICE.

2) The free Student version of Circuit Maker  
(also suggested here on the list) does all the above  
plus draw the schematic and  
has a "component" sweep function.  
I found the Help file and Tutorial very useful.

3) Only the "bridge" and associated "legs" were evaluated,  
I did not model the modulator.

4) How does the modulator work?  
Like gang busters! See below.

#### Hardware:

1) My cost \$0.00 (built an entire, practical,  
instrument from the bone yard).

1-1) A practical cost WAG is between \$20 and \$50



depending on type of enclosure and power supply.

2) I now own an impedance meter that tells me the magnitude of reactance (XL or XC) and the measure of the resistance (R) using only the noise bridge and an AM radio.

3) With in reason; calibration, resolution and accuracy can be as impressive as one chooses.

Reason

1) The complete calibration procedure is laborious (but doable in a HAM shack), it requires only an AM radio that tunes from 1.5 MHz to 30 MHz and a length of \*GOOD\* RG-8 (a quarter wave at 10 MHz, thats about 20 feet :> 0

1-1) The COMPLETE procedure is found in the ARRL Antenna Handbook

2) I mentioned a "Quick and Dirty" Impedance meter in some of the earlier posts. The MNB-01 described here is quick and dirty from a calibration stand point. That is it WORKS and calibrated (to within reason) the front panel dials for both Resistance (with a center scale of 50 Ohm) and Reactance . . . X(L) AND X(C)

3) Quick and Dirty calibration is a snap >IF< you... make >Cs< approximately equal to >Cvar< / 2. For example, if >Cvar< is a 365 pF tuning capacitor fom an old "five tube radio" make >Cs< 175 pF.

A few comments

1) The only 'test equipment' I used was a VOM from Radio Shack.

2) My noise "source" is a light emitting diode (LED ).

3) What lights the LED? The modulator. The modulator frequency is not critical. My frequency is apx. 750 Hz.

The "modulator" is one half of a 74L04.

4) >Rvar< is the most critical component in the project.  
>Rva< , a variable resistor, used to measure R,  
must be mounted in such a way that  
leads are as short as possible AND  
the human hand has no affect while tuning  
(from a stray capacitance position).

5) The "bridge" (heart of the circuit) is a transformer,  
trifiler wound on a toroid. I wound and tried several  
(powdered iron and ferrite) and all worked but  
the Mini-Circuits (MCL) T4-1 works best.  
The T4-1 is a 6-pin DIP (dual in-line package),  
(similar to the common 741 DIP op-amp).

5-1) Gene,  
<evhall@ix.netcom.com>  
has given permission to join in this  
group buy here on the list until 17July 99:  
>Date: Mon, 28 Jun 1999 21:26:34 -0400<  
>Subject: Minicircuits Group Buy ADE-1<

6) I only performed the compensation procedure  
to the point of knowing it was doable using  
the "gimmick" technique of pruning a capacitor  
described in the ARRL ANTENNA HANDBOOK.

7) I only performed the calibration procedure  
to the point of knowing it was doable (using  
junk coax "spliced" together (not RG-8)).

8) A schematic is in final stages  
(ASCII format only) and will be sent as promised.

9) An ASCII block diagram is attached.

10) The "QesD" calibration procedure is attached.

John

N3AAZ  
FM19xa

#### MNB-01 QesD Calibration Procedure:

This (QesD) procedure calibrates the MNB-01 in ARBITRARY units not ABSOLUTE units.

Yes, it measures X(L) and X(C) and R and how much.

Yes, a published compensation and calibration procedure IS available and accurate to +/- 5% (apx.).  
See the ARRL ANTENNA HANDBOOK.

The QesD (Quick and Dirty) Method,  
also known as >kisj< (KEEP iT sIMPLE jOHN).

Note, NOTHING in this procedure is critical.

The value of Cs must be approximately one half the value of Cvar.

Rotate Cvar to the full meshed position (max C).

Install a knob with a pointer on the shaft of Cvar such that the pointer is at "3 o'clock" when Cvar is fully meshed.

Mark the front panel, >X(L) MAX<

Install a 50 Ohm non inductive resistor at the UNKNOWN port.

Install an AM radio at the RADIO port (tune to any frequency, 0.5 to 30 MHz).

"NULL" the bridge,  
adjust Cvar AND Rvar until a null is heard in the radio,  
Again, adjust Cvar and Rvar until a DEEPER, SHARPER (narrow) null is

heard in the radio,  
Again and if the null is too broad (more than a "few degrees" of shaft rotation) then  
change the radio gain and or bandwidth then adjust Cvar / Rvar again for the best null possible, then,

Mark the front panel:

- 1) for the Cvar pointer, >X = 0<
- 2) for the Rvar pointer, >R = 50<

If Cs is approximately one half the value of Cvar,  
the pointer of Cvar is now at approximately 12 o'clock.

Rotate Cvar counter-clockwise to the full open position.

Mark the front panel, >X(C) = MIN<

Rotate Rvar full CW, mark the front panel >R = 0<

Rotate Rvar full CCW, mark the panel >R = MAX< (or the value of Rvar >250< in this case).

That-s it. END QesD /jk.

Anybody figure out what role SPICE had in that procedure?

To View Block Diagram...

Maximize this Window

Click EDIT

Click SELECT ALL ... (the page turns dark (highlited),  
this is OK leave it that way.

Click OPTIONS

Click FONT

Click a >NON< "T t " (true type) font such as Courier 10 pitch

Click "neutral'" on this page (the highlight goes away).

+ -----

+

```

|
| -----
| -----| Complex Parameter Port
| | ----- (to be Measured)
| |
| -----
| | Bridge | -----
| ----| |-----| Station Receiver
| | | (Xfmer)| ----- (Headphones)
| | -----
| | |
| ----- | -----
| | -----| Calibration Port
| | ----- (Variable R and C)
| -----
| | (9 V Batt) | | Amp |
| | Power Supply | |(2 ea, |
| | (7805) | | 2n2222)|
| -----
| |
| -----
| ---- | Noise |
| Modulator |-----| Source |
| -----|
| (74L04) ---- | (LED) | | Noise Bridge
|

```

```

| -----
|-----|
| | Block Diagram
|
|-----|
| | 109-0 n3aaz
|
+-----+
+
END BD /jk

```

For those interested...

The "bridge" a transformer (heart of the circuit)  
that works the best to date is the  
MCL T4-1 ( a 6 pin DIP )  
cost \*APX\* \$3.25 each.

---

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<http://dl.www.juno.com/get/web/>.

---

Date: Wed, 17 Jul 2002 06:36:42 -0600  
From: "Karl B. Staddon" <ve6kbs@agt.net>  
To: <sunwatt@starband.net>,  
"Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>  
Cc: "K4CJX Steve Waterman" <k4cjx@comcast.net>,  
"KN6KB Rick Muething" <rmuething@cfl.rr.com>,  
Subject: [129950] Re: K2 working PACTOR @ 5 watts  
Message-ID: <008001c22d8e\$b16530c0\$6501a8c0@ab.hsia.telus.net>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Jim, great to see that you are using QRP to access the Winlink 2000 HF email system. When I was in Kenya and Tanzania in September 2001 on a climbing / safari trip I sent or received about 180 HF emails via Winlink 2000 - about

90% were via ZS5S's station near Durban, South Africa (about 2,000 miles away) and the balance were via HS0AC in Bangkok, Thailand (about 4,000 miles away). I was using my FT-817, a 20 metre dipole, LDG QRP tuner, solar power and a SCS PTC-IIpro TNC (see <http://www.scs-ptc.com/> ).

You might want to consider switching to a SCS PTC-IIe or SCS PTC-IIpro TNC, both of which offer Pactor I and II and can be upgraded to Pactor III capability by doing a firmware upgrade which costs an additional US\$150. Just to give a feel for the difference in speed, Pactor I goes up to 200 bits / second, Pactor II goes up to 800 bits / second and Pactor III goes up to 3,600 bits / second. If you get a SCS TNC I think the extra cost of upgrading to Pactor III is money well spent - your experience with Pactor II and III would be DRAMATICALLY different from what you've experienced with Pactor I. Pactor II and III (not sure about Pactor I) are great QRP modes - SCS says they will work 18 dB below the noise floor.

Let me know if I can be of help to you. I have the privilege of being a Winlink 2000 PMBO station (i.e. one of 30+ HF to internet gateway node stations). As you know (others may not) the URL for Winlink 2000 is [www.winlink.org](http://www.winlink.org) .

Best regards,  
Karl B. Staddon VE6KBS PMBO  
Calgary, AB

----- Original Message -----

From: "Jim" <[sunwatt@starband.net](mailto:sunwatt@starband.net)>  
To: "Low Power Amateur Radio Discussion" <[qrp-l@Lehigh.EDU](mailto:qrp-l@Lehigh.EDU)>  
Sent: Wednesday, July 17, 2002 5:11 AM  
Subject: K2 working PACTOR @ 5 watts

> The recent article in QST about PACTOR, and the Airmail program caught my  
> eye. And my ISP filed for Chapter 11, so there is a real chance I might  
lose  
> my email, so seemed like the time was right to have a go at this.  
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> With encouragement from my friend Bob N9ZZ I started looking for a TNC  
that  
> would do PACTOR. What I found was a AEA PK-232MBX, for \$65.  
>  
> It was ruff going at 1st but now I can connect to one of the PACTOR WL2K  
> stations about 90% of the time with my K2, running 5 watts.  
>  
> The system is not perfect, but like I said I'm able to use it so I wont  
> complain too much!  
>

> 72's de Jim KJ5TF K2 # 702  
>

-----  
Date: Wed, 17 Jul 2002 07:06:17 -0600  
From: "Rod N0RC" <rod@n0rc.us>  
To: "Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>  
Subject: [129951] HOWTO: Drilling Holes in Altoids Tins  
Message-ID: <008501c22d92\$bd2db680\$6501a8c0@greyrock>  
MIME-Version: 1.0  
Content-Type: text/plain;  
                charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Folks,

After posting about my Rocky Mountain "Rock-Mite",  
<http://www.frii.com/~rwc/r-m/> I was asked how I prepared the holes in  
the Altoids tin. I figure if one person asked, others may have the  
same question. So here it is, hope it useful to some...

First I measured and marked locations, then with a spring load  
center-punch dimpled the tin (against a backer board). Next I drilled  
1/8 inch pilot holes, again against a backer board. I then used a  
taper reamer to enlarge the hole to the proper size. Finally I sanded  
off any flashing/spurs with a Dremel tool.

Sounds like a lot of work, but it wasn't too bad. I don't have much  
luck drilling large holes in thin metal, like the Altoids tins are  
made  
of. The bit sometimes grabs and messes things up.

#### Tool Sources

Reamer: Mouser, P/N 5876-44268  
          Harbor Freight, P/N 38636-0VGA

Center Punch: Harbor Freight P/N 621-0VGA  
(Spring Loaded) Similar Item from Stanley,  
                available at Home Depot...etc.

73, Rod N0RC



-----  
Date: Wed, 17 Jul 2002 09:36:59 -0400  
From: Dave Fouchey <dafouchey@comcast.net>  
To: rod@n0rc.us, Low Power Amateur Radio Discussion <qrp-1@lehigh.edu>  
Subject: [129952] Re: HOWTO: Drilling Holes in Altoids Tins  
Message-ID: <4.1.20020717093329.00945100@localhost>  
MIME-version: 1.0  
Content-type: text/plain; charset=us-ascii  
Content-transfer-encoding: 7BIT

Rod I have found that the Dewalt Pilot Point drill bit's do a really good job of staying put in the center punched hole location and give a really clean hole requiring less clean up afterwards. I usually use a piece of oak as a backer board as it give more firm support to the thin tin than does a softwood like pine. I would be interested in hearing how others handle the larger holes in the thing tin as like you I have yet to come up with a good clean way to drill or cut them.

Nice job by the way, what camera did you use for the photos?

73's  
Dave  
WA4EMr  
Sterling Heights, MI

At 07:06 AM 7/17/02 -0600, Rod N0RC wrote:

>Folks,

>

>After posting about my Rocky Mountain "Rock-Mite",  
><http://www.frii.com/~rwc/r-m/> I was asked how I prepared the holes in  
>the Altoids tin. I figure if one person asked, others may have the  
>same question. So here it is, hope it useful to some...

>

>First I measured and marked locations, then with a spring load  
>center-punch dimpled the tin (against a backer board). Next I drilled  
>1/8 inch pilot holes, again against a backer board. I then used a  
>taper reamer to enlarge the hole to the proper size. Finally I sanded  
>off any flashing/spurs with a Dremel tool.

>

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>luck drilling large holes in thin metal, like the Altoids tins are  
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>of. The bit sometimes grabs and messes things up.

>

>Tool Sources  
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>Reamer: Mouser, P/N 5876-44268  
> Harbor Freight, P/N 38636-0VGA  
>  
>Center Punch: Harbor Freight P/N 621-0VGA  
>(Spring Loaded) Similar Item from Stanley,  
> available at Home Depot...etc.  
>  
>  
>73, Rod N0RC  
>  
>  
>  
>

-----  
Date: Wed, 17 Jul 2002 08:43:58 -0500  
From: "Jim" <sunwatt@starband.net>  
To: "Karl B. Staddon" <ve6kbs@agt.net>,  
"Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>  
Cc: "K4CJX Steve Waterman" <k4cjx@comcast.net>,  
"KN6KB Rick Muething" <rmuething@cfl.rr.com>,  
Subject: [129953] Re: K2 working PACTOR @ 5 watts  
Message-ID: <004d01c22d98\$07e9ffd0\$d25a3f94@presario>  
MIME-Version: 1.0  
Content-Type: text/plain;  
 charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Thanks Karl, yes it seems to be working very well with QRP. I wasn't sure how my chances were with 5 watts, so I took the cheap route and the old AEA PK-232MBX TNC. Total cost was \$65. So it was thrifty to say the least!

So far my best connections are WB0TAX, N8PGR, W9GSS, and W9MR. All on 40M. W9MR also worked when I tried 30M. My only antennas right now are the 40 and 30M verticals, with 4 raised radials. I shortened the stingers with coils wound on PVC by 30%.

My 20M half square rounds out my antenna farm, but the few times I tried 20M I wasn't able to connect. But that was when I was on the hard side of the learning curve, so I should try 20M again.

Soon I will repair my 15/10M quad beam and look forward to trying those bands on some of the PMBO stations.

> Jim, great to see that you are using QRP to access the Winlink 2000 HF email  
> system. When I was in Kenya and Tanzania in September 2001 on a climbing /  
> safari trip I sent or received about 180 HF emails via Winlink 2000 - about  
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> away) and the balance were via HS0AC in Bangkok, Thailand (about 4,000 miles  
> away). I was using my FT-817, a 20 metre dipole, LDG QRP tuner, solar power  
> and a SCS PTC-IIpro TNC (see <http://www.scs-ptc.com/> ).

Also running Solar power here Karl. My QTH is on a mountain in the Ozarks where there is no electric available.

OK, I'll have a look at that TNC, no doubt its worth the money. Now that I know I can connect to the system it makes sense to consider an upgrade to a newer TNC. And PTC II.

> You might want to consider switching to a SCS PTC-IIe or SCS PTC-IIpro TNC,  
> both of which offer Pactor I and II and can be upgraded to Pactor III capability by doing a firmware upgrade which costs an additional US\$150.  
> Just to give a feel for the difference in speed, Pactor I goes up to 200 bits / second, Pactor II goes up to 800 bits / second and Pactor III goes up  
> to 3,600 bits / second. If you get a SCS TNC I think the extra cost of upgrading to Pactor III is money well spent - your experience with Pactor II  
> and III would be DRAMATICALLY different from what you've experienced with Pactor I. Pactor II and III (not sure about Pactor I) are great QRP modes -  
> SCS says they will work 18 dB below the noise floor.

That would make 5 watts 100% reliable for the WL2K system.

> Let me know if I can be of help to you. I have the privilege of being a Winlink 2000 PMBO station (i.e. one of 30+ HF to internet gateway node stations). As you know (others may not) the URL for Winlink 2000 is  
> [www.winlink.org](http://www.winlink.org) .

Thanks Karl, if I upgrade TNC's I just might have to contact you as I bump around the hard side of the learning curve again! Hi

Oh, also I forgot to mention, the QST article that explains the WL2K system was in the June 2002 issue of QST on page 31.

I guess the only problem with WL2K and QRP is that some stns cant hear me, and try to connect while I am trying, and QRM me. But that's a fact of life for QRP'ers, and its not hard to try another PMBO stn, or just wait until the QRM is gone.

The system is a good idea for anyone who is away from their regular ISP, and needs to maintain email. If you have done /M or /MM operation on HF bands, making the jump to the Winlink system wont be real hard. I've only done sound card digital modes, never owned a TNC before, so I had that learning curve to deal with.

Almost any battery powered XCVR can run 5 watts, so email via HF bands is a reality for just about anyone.

Thank you for the kind words, and thank you to all the PMBO stations who put out the great effort and expense to provide the fine service!

Oh, one question please... I noticed that there is a AMTOR email system also. But its going to be discontinued? I think I saw it mentioned on the ZS5S website.

If anyone knows anything about that I'd like to hear more. I have MixW sound card program, and I think it has AMTOR TX/RX.

72/73's de Jim KJ5TF

>

> Best regards,

> Karl B. Staddon VE6KBS PMBO

> Calgary, AB

>

>

> ----- Original Message -----

> From: "Jim" <sunwatt@starband.net>

> To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>

> Sent: Wednesday, July 17, 2002 5:11 AM

> Subject: K2 working PACTOR @ 5 watts

>

>

> > The recent article in QST about PACTOR, and the Airmail program caught my

> > eye. And my ISP filed for Chapter 11, so there is a real chance I might lose

> > my email, so seemed like the time was right to have a go at this.

> >

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> > would do PACTOR. What I found was a AEA PK-232MBX, for \$65.

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> >  
> > The system is not perfect, but like I said I'm able to use it so I wont  
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> >  
> > 72's de Jim KJ5TF K2 # 702  
> >  
>  
>  
>

-----  
Date: Wed, 17 Jul 2002 21:43:24 -0400  
From: "ss lyon" <sslyon@megalink.net>  
To: "Karl F. Larsen" <k5di@zianet.com>  
Cc: "Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>  
Subject: [129954] Re: Noise Bridge... case  
Message-ID: <008501c22dfc\$816b5a20\$aac7e742@megalink.net>  
MIME-Version: 1.0  
Content-Type: text/plain;  
                charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

No case included, Karl. The case will vary quite a bit as individuals substitute the 'minimalist' R & C supplied for more substantial ones -if they're inclined to max it's usefulness and durability.

73

AA1MY

Seabury & Sharon Lyon  
99 Sparrowhawk Mtn Rd  
Bethel ME, 04217 U.S.A.  
207-836-2576

Virus Protection by Norton and ZoneAlarm

----- Original Message -----

From: "Karl F. Larsen" <k5di@zianet.com>  
To: "ss lyon" <sslyon@megalink.net>  
Cc: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>  
Sent: Tuesday, July 16, 2002 10:43 PM  
Subject: Re: Noise Bridge... oooops!

>  
> Thanks Seabury, sounds like an interesting kit. I will look at the web

> page. Surely there's no case provided for \$17 is there?  
>  
> On Wed, 17 Jul 2002, ss lyon wrote:  
>  
> > I said NN1G Noise Generator (all those 'n's & 'g's) and meant to say NOISE  
> > BRIDGE. Sorry for the confusion.  
> > -but I am the supplier -if I don't keep making these goofs!  
> > 72  
> > AA1MY  
> > Seabury & Sharon Lyon  
> > 99 Sparrowhawk Mtn Rd  
> > Bethel ME, 04217 U.S.A.  
> > 207-836-2576  
> >  
> > Virus Protection by Norton and ZoneAlarm  
> >  
> >  
>  
> --  
> Yours Truly,  
>  
> - Karl F. Larsen, (505) 524-3303 -  
>

-----  
Date: Wed, 17 Jul 2002 14:19:12 +0000  
From: "Leon Heller" <leon\_heller@hotmail.com>  
To: rod@n0rc.us, qrp-1@lehigh.edu  
Subject: [129955] Re: HOWTO: Drilling Holes in Altoids Tins  
Message-ID: <F72vAauNjVuMhvgStM000035e9@hotmail.com>  
Mime-Version: 1.0  
Content-Type: text/plain; format=flowed

>From: "Rod N0RC" <rod@n0rc.us>  
>Reply-To: rod@n0rc.us  
>To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>  
>Subject: HOWTO: Drilling Holes in Altoids Tins Date: Wed, 17 Jul 2002  
>07:06:17 -0600  
>  
>Folks,  
>  
>After posting about my Rocky Mountain "Rock-Mite",  
><http://www.frii.com/~rwc/r-m/> I was asked how I prepared the holes in

>the Altoids tin. I figure if one person asked, others may have the  
>same question. So here it is, hope it useful to some...  
>

I use a 'Conecut' bit for holes in sheet metal. It's a bit like a tapered reamer, but larger, and is used in a bench drill. Don't know how well it works on thin stuff, like Altoids tins, though.

73, Leon

--

Leon Heller, G1HSM Tel: +44 1327 359058 Email:leon\_heller@hotmail.com

My web page: [http://www.geocities.com/leon\\_heller](http://www.geocities.com/leon_heller)

My low-cost Altera Flex design kit: <http://www.leonheller.com>

-----  
Chat with friends online, try MSN Messenger: <http://messenger.msn.com>

-----  
Date: Wed, 17 Jul 2002 07:24:39 -0700  
From: "Bob Hightower" <nk7m@extremezone.com>  
To: "qrp" <qrp-1@lehigh.edu>  
Subject: [129956] Tuthill registrations  
Message-ID: <004501c22d9d\$afca95c0\$b54998d0@bobscomputer>  
MIME-Version: 1.0  
Content-Type: text/plain;  
                charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Thursday, July 18th, is the last day we can accept pre-registrations for the annual Fort Tuthill QRP doin's.

This means that if you haven't registered by then, you won't have a nametag, nor will you get one of the extremely rare, limited edition ScQRPions enameled pins :^(

So, if you plan on coming, and haven't already done so, please send a note in reply to me, cc to [jparker@fix.net](mailto:jparker@fix.net), and we'll get you set up.

Still no word on lifting the restrictions on the campground, but we have three spaces inside the fence for RVs (\$10.00/nite), and can probably squeeze some tenters in there, so please let me know ASAP if you need space. We have also reserved three motel rooms (\$50.00/nite) in Flagstaff for those who haven't gotten one yet, so, again, let us know if you need a bed. Friends can share, as well, to cut down on the cost.

Dan Tayloe reports that Howard Johnson's has a manager's special going, and there may be rooms available at \$39.00/nite, so you might check them out.

Bob NK7M

-----  
Date: Wed, 17 Jul 2002 14:47:30 +0100  
From: Chuck Adams <k7qo@earthlink.net>  
To: jamesd1@flash.net,  
"Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>  
Subject: [129957] Re: Rock-Mite Mod #1  
Message-ID: <5.1.0.14.0.20020717144526.009fe5c0@mail.earthlink.net>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"; format=flowed

At 09:40 PM 7/16/02 -0600, James R. Duffey wrote:

>Gee Chuck (and Dave) - I want one for 30 M, the queen of all QRP bands. I am  
>surprised that you don't want one for this band as well. What is involved in  
>changing bands?

snip

>--

>James R. Duffey KK6MC/5  
>Cedar Crest, NM DM65

Jim,

Without a IF amp I'd be prone not to put one on 30 m (SI abbreviation Jim!).  
I do have crystals for 10.106 and 10.116 to try it out. You would have to  
change  
the inductors in the PA final filter also and maybe one or two other L values  
to get the rig on 30 m. I'll check when I get the one that I ordered yesterday  
and look at the schematic.

dit dit

Chuck Adams, K7QO CP-60 k7qo@earthlink.net  
<http://www.qsl.net/k7qo>

Moving to Arizona? --- Bring your own water, please.



-----  
Date: Wed, 17 Jul 2002 14:54:41 +0000  
From: "Brad Hernlem" <alihernlem@hotmail.com>  
To: leon\_heller@hotmail.com  
Cc: qrp-l@lehigh.edu  
Subject: [129958] Re: 2N5564 good at RF?  
Message-ID: <F74ju1RXEB0AozujCGl00017a1c@hotmail.com>  
Mime-Version: 1.0  
Content-Type: text/plain; format=flowed

>From: "Leon Heller" <leon\_heller@hotmail.com>  
>>From: "Brad Hernlem" <alihernlem@hotmail.com>  
>>Reply-To: alihernlem@hotmail.com  
>>To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>  
>>Subject: 2N5564 good at RF?  
>>Date: Tue, 16 Jul 2002 21:52:42 +0000  
>>  
>>Do these dual matched N-channel JFETs have any RF application? I've got a  
>>few hundred of them. Am wondering whether they would do well for FET probe  
>>use or other RF application. Anyone familiar with these?  
>>  
>  
>I built an FET voltmeter many years ago with a matched pair of similar  
>devices. It worked very well with a diode probe. Might have been the same  
>FETs; they were TI, and came with a clip holding them together. I think  
>they were actually matched 2N3819s.

Leon,

The parts that I have are in the same package, a small metal can (T0-71?),  
with six leads. I think that the FETs are on the same die and trimmed to  
match.

Brad KG6IOE

-----  
MSN Photos is the easiest way to share and print your photos:  
<http://photos.msn.com/support/worldwide.aspx>

-----  
Date: Wed, 17 Jul 2002 11:10:55 -0400  
From: "Steve Lawrence" <Steve.Lawrence@itwfeg.com>

To: qrp-1@lehigh.edu  
Subject: [129959] Re: KIT: the 'Rock-mite'  
Message-ID: <0F92B7C60E.98AA2DC1-0N85256BF9.0052D7F0-85256BF9.005365CC@itwfeg.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

Rod, et. al...

Given such a limited (2 fixed frequency, one band) tuning range of the Rock-Mite, why not just cut an antenna for 40m at the Rock-Mite frequency of 7040 Khz, and eliminate a tuner (BLT, ZM-2, etc.)? Wouldn't this get the losses associated with the tuner (no matter how good they are, don't they have losses?) out of the path of delivering power to the antenna, and thus maximize performance of this tiny tranciever?

Or am I missing something...?

Steve  
aa8af

-----  
Date: Wed, 17 Jul 2002 16:53:30 +0200  
From: "Ingo Meyer, DK3RED" <dk3red@t-online.de>  
To: QRP-L <qrp-1@lehigh.edu>  
Subject: [129960] Re: HOWTO: Drilling Holes in Altoids Tins  
Message-ID: <3D3584EA.206FB2F6@t-online.de>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Hello Rod and Dave and all thin metal driller,

Try it with two metal (aluminium/aluminum) boards (2-3mm thick). The first as a backer board and the second (with a small 1-2mm pilot hole) as front board. Look through the pilot hole and adjust the right position. SECURE the right position of the three parts with one/two screw clamps. (I don't know the right word in English. In German is it "Schraubklemme".) Drill through the two boards and the thin metal in the middle like through a single board. A drill with the proper size is possible by small holes. For larger holes use the step by step methode (each drill a little bit larger than the other one).

--

72/73 de Ingo, DK3RED    Don't forget: the fun is the power!

dk3red@t-online.de    <http://www.t-online.de/~dk3red>

DL-QRP-AG #824 <http://www.dl-qrp-ag.de>

-----  
Date: Wed, 17 Jul 2002 11:23:26 -0400  
From: David Hinerman <WD8CIV@worldnet.att.net>  
To: qrp-1@lehigh.edu  
Subject: [129961] Re: 2N5564 good at RF?  
Message-ID: <5.1.0.14.1.20020717112100.00a77ec0@ipostoffice.worldnet.att.net>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"; format=flowed

At 02:54 PM 7/17/2002 +0000, you wrote:

```
>>From: "Leon Heller" <leon_heller@hotmail.com>
>>>From: "Brad Hernlem" <alihernlem@hotmail.com>
>>>Reply-To: alihernlem@hotmail.com
>>>To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
>>>Subject: 2N5564 good at RF?
>>>Date: Tue, 16 Jul 2002 21:52:42 +0000
>>>
>>>Do these dual matched N-channel JFETs have any RF application? I've got
>>>a few hundred of them. Am wondering whether they would do well for FET
>>>probe use or other RF application. Anyone familiar with these?
>>
>>I built an FET voltmeter many years ago with a matched pair of similar
>>devices. It worked very well with a diode probe. Might have been the same
>>FETs; they were TI, and came with a clip holding them together. I think
>>they were actually matched 2N3819s.
>
>Leon,
>
>The parts that I have are in the same package, a small metal can (T0-71?),
>with six leads. I think that the FETs are on the same die and trimmed to match.
```

Brad,

I think such critters were offered as differential amplifiers for FET VOMs and other applications where balance is important.

Like in a balanced mixer, maybe? I'll bet I could find a use for a few. Would you want to sell some?

Dave

-----  
"You can fool some of the people all of the time. That's enough to make a living." - Lance Burton  
-----

Dave Hinerman  
WD8CIV@worldnet.att.net

-----  
Date: Wed, 17 Jul 2002 09:30:50 -0600 (CST)  
From: "Brian.Buydens@usask.ca" <buydens@duke.usask.ca>  
To: "Ingo Meyer, DK3RED" <dk3red@t-online.de>  
Cc: Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>  
Subject: [129962] Re: HOWTO: Drilling Holes in Altoids Tins  
Message-ID: <Pine.OSF.4.44.0207170929200.519430-100000@duke.usask.ca>  
MIME-version: 1.0  
Content-type: TEXT/PLAIN; charset=US-ASCII

On Wed, 17 Jul 2002, Ingo Meyer, DK3RED wrote:

> Hello Rod and Dave and all thin metal driller,  
>  
> Try it with two metal (aluminium/aluminum) boards (2-3mm thick). The first  
> as a backer board and the second (with a small 1-2mm pilot hole) as front  
> board. Look through the pilot hole and adjust the right position. SECURE  
> the right position of the three parts with one/two screw clamps. (I don't  
> know the right word in English. In German is it "Schraubklemme".) Drill

Schraubklemme = "C-clamp" in English

(Courtesy of <http://babelfish.altavista.com/tr>)

Brian.

Brian Buydens  
Veterinary Electronic Data Specialist  
Computing Services, University of Saskatchewan  
email: Brian.Buydens@usask.ca  
<http://duke.usask.ca/~buydens>  
VE5RDV

-----  
There is nothing to it. You only have to hit the right notes at the right time and the instrument plays itself.  
- Johann Sebastian Bach

-----  
Date: Wed, 17 Jul 2002 11:37:36 -0400  
From: Bruce Muscolino <w6toy@erols.com>  
To: k5di@zianet.com, qrp-l@lehigh.edu  
Subject: [129963] Re: Radial Lengths (long, was dipping traps)  
Message-ID: <3D358F40.A6B1E7A3@erols.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Karl,

My experience with elevated radials is with only one antenna. It was a HyGain 18AVQ vertical mounted on the roof of my house in Holland. I used full quarter wave radials laying on the roof tiles. The antenna was a winner!

I also had a 14AVT vertical mounted at ground level in my backyard. I credit this antenna with teaching me about RF grounds! Until I ran radials for it, it was just a dummy load! I ran quarter wave radials there too. They were elevated about a meter, bu brush!

Is the absolute length of the radials important. I suspect so, but it may not be as critical as you think. In a perfect world, with NO antenna tuner, the radials will help set the antenna's feed point impedance. At best it will be 37 ohms.

However, we do not live in a perfect world. And we almost all use antenna tuners! Our antennas are not perfect quarter waves. We use trapped verticals, or short antennas. The penalty we pay is in the feed point impedance, and bandwidth!

Our antenna tuners compensate for much of the discrepancy. We still get out. The important thing we want to ask is how much additional loss do we experience from radials that are not exactly a quarter wavelength? And what do we do when we change frequency; a quarter wave is only a quarter wave at one frequency, and the bands have millions of frequency choices!

There is a lot to be said for academic rigor in our discussions, but always remember this is a practical hobby. Very little to do with HF antennas requires academic rigor!

-----  
Date: Wed, 17 Jul 2002 11:08:37 -0400  
From: Steven Weber <kd1jv@moose.ncia.net>  
To: qrp-l@lehigh.edu  
Subject: [129964] Re: Fw: Major Solar Flare prompts an Aurora Watch  
Message-ID: <3.0.6.32.20020717110837.0079f440@mailhost.ncia.net>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

>POSSIBLE MID-LATITUDE AURORAS OVER THE NEXT SEVERAL DAYS

>

Figures! It was clear and stary here the last few days, now it's going to be overcast for the next few days...that's just the way it works here in the mountains :-)

20 M was in good shape Monday night, worked a baker's half dozen EU stations with 5W SSB. That "88" up at the summer QTH is really doing a great job! One fellow in Sweden was quite amazed at how well I was doing over there :-)

20M was a lot quieter - almost dead- last night, only managed to work a chirpy LZ2 on CW. Wonder what the next few nights will be like?

72,  
Steve, KD1JV  
"Melt Solder"  
White Mountains of New Hampshire  
<http://www.qsl.net/kd1jv/>

-----  
Date: Wed, 17 Jul 2002 12:20:17 -0400  
From: Steven Weber <kd1jv@moose.ncia.net>  
To: qrp-l@lehigh.edu  
Subject: [129965] KITS: The AAPB, SMT KIT II  
Message-ID: <3.0.6.32.20020717122017.0079fbc0@mailhost.ncia.net>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

Hi Gang,

It's a go, get your tweezers and magnifying glasses ready!

Got the boards on order and my board guy says he's not too busy, so might not take too long to get them. These will be silk screened and solder masked boards. Should be able to start shipping them in about 3 weeks. So, if you'd like one - or two, go ahead and send me \$20.00 per kit plus \$1.50 shipping (US or Canada, DX \$5.00) to me at

Steven Weber  
633 Champlain St  
Berlin, NH 03570

In case you missed the discription the other day, here's what it is:

AAPB- Analog Audio Processor Board:

Combines an Automatic Volume limiting (AVC) circuit with two 700 Hz band pass filters (Q of 5) and a low impedance headphone or small 8 ohm speaker driver/ampifier. Pervisons for adding a switch to select one, both or no filters and a volume control, if desired. This is a prefict companion board for SWL's new Rock Mite or other "minimualist" receivers. Built with SMT components (1206 size) on a 1.7" x 1.8" single sided board.

The circuit and discription can be seen at <http://www.qsl.net/kd1jv/appb.HTM>

Thanks!

72,  
Steve, KD1JV  
"Melt Solder"  
White Mountains of New Hampshire  
<http://www.qsl.net/kd1jv/>

-----  
Date: Wed, 17 Jul 2002 09:24:38 -0700  
From: "Bill Jones" <kd7s@psnw.com>  
To: <k7qo@earthlink.net>,  
"Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>  
Subject: [129966] Re: Rock-Mite Mod #1  
Message-ID: <000901c22dae\$7300b1e0\$9110010a@fresno>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Chuck,

The Rock-Mite uses a direct conversion receiver and the transmitter strip is a simple, straightforward three transistor design so putting one on 30 meters should be a snap. As I see it, there isn't much to change except the

front end components and transmitter low pass filter. The transmit offset might have to be tweaked a little also but that shouldn't present any problems either.

=====

Bill Jones - <><  
Sanger, California

=====

----- Original Message -----

From: "Chuck Adams" <k7qo@earthlink.net>

> Without a IF amp I'd be prone not to put one on 30 m (SI abbreviation Jim!).

> I do have crystals for 10.106 and 10.116 to try it out.

-----

Date: Wed, 17 Jul 2002 10:13:22 -0700

From: "Bob Tellefsen" <n6wg@earthlink.net>

To: <qrp-l@lehigh.edu>

Subject: [129967] Re: HOWTO: Drilling Holes in Altoids Tins

Message-ID: <MABBJOEABOILMKCJCLFCEECJDHAA.n6wg@earthlink.net>

MIME-Version: 1.0

Content-Type: text/plain;

charset="iso-8859-1"

Content-Transfer-Encoding: 7bit

Rod

I use a stepped drill bit, not sure of the correct name.

It has stepped diameters, with two cutting edges.

Looks sort of like a stepped cone.

Works absolutley great on the thin metal of an  
Altoids can. I put BNC connector holes at each end  
of the can for my preamps.

I use an old dental pick to punch a starting hole,  
then enlarge to 1/8 inch with a drill. Then use the stepped  
bit to get whatever size hole I need. No rough edges,  
no flashing left around the edges, no bending in of the  
thin metal. Can't beat it.

73, Bob N6WG

-----

Date: Wed, 17 Jul 2002 12:16:38 -0500

From: "David Bixler" <qrp@netins.net>

To: "Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>

Subject: [129968] Four State QRP Group Wednesday Warble



Message-ID: <005201c22db5\$b672c2e0\$e915b9cc@Host>  
MIME-Version: 1.0  
Content-Type: text/plain;  
          charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Hi gang:

The Four State QRP Group will have some PSK activity tonight  
on about 3580.5 KHz. If you are in range of our signals, stop by and  
say howdy around 9 PM central time.

Last week despite poor conditions on 80 meters, we had a fun  
session. Jerry, W0PWE called in from Iowa with a pretty good  
signal.

72, Dave

David Bixler                           W0CH  
Seneca, Missouri  
Four State QRP Group: <http://w0ch.com/fsqrp/index.htm>  
QRP Web Site Main:     <http://w0ch.com>  
QRP Web Site Mirror:   <http://showcase.netins.net/web/w0ch/>

QRP: Little radios, big fun!

-----  
Date: Wed, 17 Jul 2002 13:34:48 -0400  
From: "w8diz" <w8diz@fpqrp.com>  
To: "Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>  
Subject: [129969] Re: Four State QRP Group Wednesday Warble  
Message-ID: <003701c22db8\$3ff8d660\$0200000a@hunkar.com>  
MIME-Version: 1.0  
Content-Type: text/plain;  
          charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Hi Dave (and the Four State QRP Group )

If you guys get a chance, listen for a beacon on or near  
3578.5 tonight. I'm doing some summer propagation test  
on 80 meters to compare to a winter test that I did back  
18 months ago. 25 MW using a 470 horiz loop.

72 & "oo's" - Dieter (DIZ) Gentzow - W8DIZ - Loveland, Ohio

Clermont County near Cincinnati; EM79uf; 39.218N - 84.305W  
<http://home.cinci.rr.com/w8diz> & <http://kitsandparts.com>

----- Original Message -----

From: "David Bixler" <qrp@netins.net>  
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>  
Sent: Wednesday, July 17, 2002 1:16 PM  
Subject: Four State QRP Group Wednesday Warble

Hi gang:

The Four State QRP Group will have some PSK activity tonight on about 3580.5 KHz. If you are in range of our signals, stop by and say howdy around 9 PM central time.

Last week despite poor conditions on 80 meters, we had a fun session. Jerry, W0PWE called in from Iowa with a pretty good signal.

72, Dave

David Bixler                      W0CH  
Seneca, Missouri

---

Four State QRP Group:    <http://w0ch.com/fsqrp/index.htm>  
QRP Web Site Main:        <http://w0ch.com>  
QRP Web Site Mirror:     <http://showcase.netins.net/web/w0ch/>

QRP: Little radios, big fun!

Date: Wed, 17 Jul 2002 13:35:22 -0400  
From: "Mark J. Dulcey" <mark@buttery.org>  
To: n6wg@earthlink.net  
Cc: Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>  
Subject: [129970] Re: HOWTO: Drilling Holes in Altoids Tins  
Message-ID: <3D35AADA.5080905@buttery.org>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii; format=flowed  
Content-Transfer-Encoding: 7bit

Bob Tellefsen wrote:  
> Rod

> I use a stepped drill bit, not sure of the correct name.  
> It has stepped diameters, with two cutting edges.  
> Looks sort of like a stepped cone.  
> Works absolutley great on the thin metal of an  
> Altoids can. I put BNC connector holes at each end  
> of the can for my preamps.

I use a bit like that, too; found out about it from a post here last year. It really does work; it makes much cleaner holes than regular twist bits do. And you only need the one bit for all the holes you'll make. Of course, that one bit does cost something like \$15, but it's well worth it.

Mine is called a Unibit (<http://www.unibitstepdrill.com>). They come in a variety of sizes (numbered 1 through 5, plus metric sizes 1M through 5M); I have found the smallest one (#1) to be the most useful for QRP building. I got mine at Home Depot; I'm sure many other places have them also.

-----  
Date: Wed, 17 Jul 2002 10:48:10 -0700  
From: Bruce Grubbs <[mail@brucegrubbs.com](mailto:mail@brucegrubbs.com)>  
To: nk7m@extremezone.com,  
"Low Power Amateur Radio Discussion" <[qrp-1@lehigh.edu](mailto:qrp-1@lehigh.edu)>  
Subject: [129971] Re: Tuthill registrations  
Message-ID: <E17Ust8-0001Kv-00@pintail.mail.pas.earthlink.net>  
Content-Type: text/plain;  
 charset="iso-8859-1"  
MIME-Version: 1.0  
Content-Transfer-Encoding: 8bit

Bob,  
We've had a couple of decent rains, and today we're getting a steady drizzle. That's the best possible precip to get the forest and Tuthill open. So it may happen by then.

Sorry I'm going to miss the whole thing. I'll be in Colorado backpacking.

73  
Bruce  
N7CEE  
Flagstaff

-----  
Date: Wed, 17 Jul 2002 13:45:23 -0400

From: "Mike Yetsko" <myetsko@insydesw.com>  
To: <mark@buttery.org>,  
"Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>  
Subject: [129972] Re: HOWTO: Drilling Holes in Altoids Tins  
Message-ID: <004401c22db9\$be9aa240\$0300a8c0@charter.net>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Unibits or 'step drills' cut differently than regular drill bits. Regular bits

cut and pull into the work. (And yes, I know that Mototool bits for the drywall tool 'push' when they cut, but they are for drywall routing.)

Unibits are neutral in that regard, and they generally only cut at ONE point in their rotation.

They are great for punching holes in sheets, MUCH better than most twist drill bits.

Mike

-----  
Date: Thu, 18 Jul 2002 02:30:45 -0400  
From: "ss lyon" <sslyon@megalink.net>  
To: "chat qrp" <qrp-1@lehigh.edu>, "NEQRP LIST" <neqrp@jonal.net>  
Subject: [129973] NOISE BRIDGE INFO on NEQRP Site  
Message-ID: <00f801c22e24\$a64909a0\$aac7e742@megalink.net>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Just found that if you use the lookup address for NEQRP (the one I originally forwarded) with the "html" at the end, the left column containing all the links doesn't come up.

S000oo, just use <http://www.qsl.net/wq1rp> then go to "Projects" in the left hand column on the home page -and all is well. Thanks to Jim W1PID for illuminating that lil' glitch.

More bridge application info will be posted on that site shortly.

73

Seabury & Sharon Lyon

99 Sparrowhawk Mtn Rd  
Bethel ME, 04217 U.S.A.  
207-836-2576

Virus Protection by Norton and ZoneAlarm

-----  
Date: Wed, 17 Jul 2002 14:00:42 -0500  
From: <mgoins@usa.net>  
To: <qrp-1@lehigh.edu>  
Subject: [129974] Solar Charger control unit  
Message-ID: <20020717190042.9876.qmail@uwdvg003.cms.usa.net>  
Mime-Version: 1.0  
Content-Type: text/plain; charset=ISO-8859-1  
Content-Transfer-Encoding: quoted-printable

I just received my order from Electronic Goldmine, and I am more than a little  
impressed. I was planning to build a solar charger controller (so I can be  
completely solar powered), when I stumbled upon this one.

It is a 150 watt unit that, at \$12.95, was probably about what it would have  
cost me to build. Has green (charging), yellow (fully charged, and now  
trickling), and red (blown fuse) LEDs, and comes with a pot so you can set the  
voltage. Hookup directions are super simple. =

Part # is SBC010000PEB for anyone interested. ([www.goldmine.com](http://www.goldmine.com))

No vested interest. Mileage varies with consumer.

mike  
wb5yjx  
One watt all the time

-----  
Date: Wed, 17 Jul 2002 15:16:08 -0400  
From: "Brian B. Riley \ (N1BQ\)" ListAcct" <n1bq\_list@wulfdn.org>  
To: <wb8rcr@arrl.net>,

"Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>  
Subject: [129975] RE: Charging a 150amp/hr battttery  
Message-ID: <NLECJEINFMOPPBOKKBNEKEFGFBAA.n1bq\_list@wulfdn.org>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

As I have said on numerous occasions, I live off the grid ... so dealing with high current sources is old hat. I too had a 'vaporization moment' early on in my off-grid oddyssey, rendering an open ended 9/16 Craftsman wrench into equal parts molten metal and metal film spattered on my shirt sleeve and surrounding battery parts. The dropped wrench shorted across a Trojan L-16 (6 VDC @ 375 AH).

Besides increased general vigilance, I went out and bought a small socket wrench set and open ended wrench set as well as Allen hex and appropriate sized screwdrivers, Phillips and flat-blade. I took out of the sets the items spofocally used in my 'power room' and then sat down to my bench with a copious array of heat shrink and black plastic electrician's tape. I basically insulated all the shaft areas leaving exposed only the working ends. I bought a small tool box which I boldly labeled "Power Room Tools" and those tools are in there, not to be used for anything but. The rest I put into the 'the general tool box.'

I am not a whole lot less fumble-fingered than I was back then, but the consequences now are considerably diminished!

cheers ... brian, n1bq

-----Original Message-----

From: owner-qrp-1@Lehigh.EDU [mailto:owner-qrp-1@Lehigh.EDU] On Behalf Of John J. McDonough  
Sent: Tuesday, July 16, 2002 8:01 PM  
To: Low Power Amateur Radio Discussion  
Subject: Re: Charging a 150amp/hr battttery

There is something else I didn't see mentioned directly.

These batteries are capable of delivering an astonishing amount of current in a short time. Somebody did mention a fuse, but failed to mention what could happen if you omitted it. He also mentioned "near" the battery - be ABSOLUTELY CERTAIN that nothing conductive can get anywhere upstream of the fuse, other than the wire to the fuse. Arrange some way to get those battery contacts firmly encased in plastic before you attempt anything else.

We tend to get a bit cavalier about this electricity stuff since most of our equipment operates from 12 volts. But twelve volts at a few hundred amps can be truly terrifying. I once saw an open end wrench simply disappear when it came across the contacts of one of these puppies. Fortunately, it wasn't in anyone's hand, but a half pound of steel turned into vapor in a few milliseconds is a thing to behold. Imagine what that hot plasma could do to your body!

-----  
Date: Wed, 17 Jul 2002 15:32:19 -0400  
From: "M.M." <markem@cox.net>  
To: qrp-l@lehigh.edu  
Subject: [129976] Re: Solar Charger control unit  
Message-ID: <20020717193220.IQIU4796.lakemtao08.cox.net@smtp.central.cox.net>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=ISO-8859-1  
Content-Transfer-Encoding: 7bit

Mike wrote:

> I just received my order from Electronic Goldmine, and I am more than a little  
> impressed. ...

On the advice of several list members, I picked up one of those units a few weeks ago. It works great with my 64W panel and 150Ahr battery. For the price it seems hard to beat. My only question is about the float voltages they tell you to set using the pot. They seem to be a bit high to me. Shouldn't a lead-acid battery be floated at about 13.8v? The instruction sheet specifies a voltage much higher.

Mark AA7TA

-----  
Date: Wed, 17 Jul 2002 15:39:42 -0400  
From: "Mike Yetsko" <myetsko@insydesw.com>  
To: "Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>  
Subject: [129977] Solar death!  
Message-ID: <004401c22dc9\$b4081460\$0300a8c0@charter.net>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

I guess it killed everything! The sun I mean. I'm hearing nothing right

now on the K2.

But early this morning, I couldn't get the local rock station at 107.9 in the car. Another station was killing it.

Sun's doing wierd things!

Mike

-----  
Date: Wed, 17 Jul 2002 15:06:03 US/Central  
From: n5wbishp@blkbox.com  
To: qrp-l@lehigh.edu  
Cc: n5wbi@arrl.net  
Subject: [129978] Anybody Else Using the K9AY 20M QRP Xcvr?  
Message-ID: <200207172006.g6HK63an003565@blkbox.com>

Are there any other QRP'ers out there who use the K9AY 20M CW QRP transceiver? I very seldom (like never) see it mentioned in any of the QRP forums.

Mine was manufactured by A&A Engineering. The company is still in business ( <http://www.a-aengineering.com/> ) but their website no longer features transceivers.

The ARRL has a very good review in PDF format of the radio at <http://www.arrl.org/tis/info/pdf/9606045.pdf>

Gary Breed (K9AY), the designer of the radio, has always been very courteous, helpful, and prompt in his replies to my e-mails.

I have been well pleased with the radio. Using an end-fed halfwave with counterpoise and my ZM-2 tuner, I was able to work NJ with just under 4.5 watts. That may not sound like much to many seasoned QRP gurus, but for this neophyte QRP'er, it really astonished me!!

I've been having so much fun with this radio, I'm surprised that I've not seen anything in the QRP forums about it!

72 de Steve N5WBI  
n5wbi@arrl.net



-----  
This message was sent using Black Box MailMan.  
<http://www.blkbox.com/mailman/mmstdol.cgi>

-----  
Date: Wed, 17 Jul 2002 17:22:58 -0400  
From: "Hudson, Steve (RBI-US CMD)" <sdhudson@reedbusiness.com>  
To: qrp-1@lehigh.edu  
Subject: [129979] Moving sale continues (July 17)  
Message-ID: <A7E30DBD5928D442A7AE9EF215EEE133017D37A1@BINCMDGNOREXC02>  
MIME-Version: 1.0  
Content-Type: text/plain;  
          charset="iso-8859-1"

July 17

Pre-moving clean-up continues; thus more stuff for sale. Individual items or a few items are plus shipping from 30004. Larger "lots" are priced as noted.

Thanks,

Steve Hudson AA4BW

#### METERS

201. Meter. Lafayette 0-25 volt meter. Works fine. Extra set of contacts at top; not sure what they're for. Rectangular face about two and three-eighths wide by one and three-quarters deep. Mounts in 1.5-inch hole. \$4.

202. Meter. A "W.S. No. 19 Voltmeter" made by Simpson Electric Co., according to the logo embossed on the back. The scale is calibrated 0-15 and 0-600. On the lower left side of the scale it reads "Model 125" and on the lower right it reads "6323". I checked the movement and it works, but it does not read voltage directly...apparently a dropping resistor was used. The meter is in a black round case 2.75 inches in diameter and mounts in a 2.25 inch round hole. \$4

203. Meter. Lafayette, 0-10 volts. Works fine. Extra set of contacts at top; not sure what they're for. Rectangular face about two and three-eighths wide by one and three-quarters deep. Mounts in 1.5-inch hole. Matches 201 above. \$4.

204. Meter. Lafayette 0-10 DC amps (yes, amps). Includes shunt. Works fine. Extra set of contacts at top; not sure what they're for. Rectangular face about two and three-eighths wide by one and three-quarters deep. Mounts in 1.5-inch hole. Matches 201 above. \$4.

205. Meter. Simpson Electric, 0-5 DC milliamps. Round face about 2 5/8 inches in dia, mounts in hole about 2 1/8 inches. \$4

206. Meter, edge mount, labeled "EMICO." An S-meter, reads 1-9 and to 60 db. Mounts in 1.75x0.75 rectangular hole. Screw terminals. \$3

If anyone wants all six meters as a group, call it \$17 plus \$12 for packing and shipping via UPS ground.

#### POWER SUPPLY PARTS

210. Box of parts labeled "Power Supply Parts." Includes the following:

- 1) one "23V54" transformer with 115/230 volt primary and secondary of 12v/16a or 24v/8a. One terminal of one secondary winding appears to be brought out to a heavy wire loop instead of a terminal. Short wires soldered to some terminals
  - 2) One 35,000 mfd, 40 vdc cap, Sangamo, screw terminals, with mount ring.
  - 3) One 4000 uf, 50v Sprague Atom electrolytic, leads bent for PC board mounting. Cap has been removed from a board.
  - 4) One 20,000 mfd, 30 v Sangamo cap, screw terminals, no mount ring
  - 5) Line cord, three-wire
  - 6) Bag of about 15 1N4004 diodes
- \$20 for all

211. Four power transformers. All 120 volt primary. Secondaries labeled as follows: one at 18 volt 4 amp, one at 25.2 volt 2 amp, one at 12.6 volt 2 amp and one at 25.2 volt 3 amp. \$5 each or \$15 for all four.

212. Block of eight 0.7 ohm, IRC 6936 PW7 power resistors wired in parallel on phenolic board. These are the boxy gray resistors measuring 1.375 in long and just over 5/16 in. wide and high. \$4

213. Another block of eight 0.7 ohm, IRC 6936 PW7 power resistors wired in parallel on phenolic board. These are the boxy gray resistors measuring 1.375 in long and just over 5/16 in. wide and high. \$4

If anyone wants both 210, 211, 212 and 213 together, call it \$29 plus \$15 for UPS ground packing and shipping.

## VARIABLE CAPACITORS

220. Variable capacitor. 1.5-inch dia plates, quarter inch centered shaft. Panel mount. Brass colored shaft, phenolic front frame. Seven rotor plates, seven stator plates. No manufacturer name that I can find. \$3

221. Variable capacitor. Plates about 1.25 inches in diameter, centered quarter inch shaft, panel mount. Ceramic front and rear frame. Four rotor plates, three stator plates. Panel mount. \$4

222. Variable capacitor. Hammarlund HF15, quarter inch shaft, panel mount or mount via threaded foot. A small air-wound coil is soldered across this one; it could be easily removed. \$4

223. Variable capacitor. Hammarlund MC20S. 1.5 inch dia plates, centered quarter inch shaft. One rotor plate, two stator plates. Threaded for panel mount or mounts via two feet with threaded holes. \$4

227. Variable capacitor. Hammarlund, brass plates, ceramic frame. Two threaded mounting holes in feet, also threaded for panel mounting. Quarter-inch centered shaft. Total of five plates, plate spacing about 1/16 inch, plates 1.5 inches in diameter. Solder on lugs indicates it has been used, otherwise in very good condition. \$6.

229. Variable capacitor. An unusual Cardwell unit. Split stator differential type, plates 1.25 inches in diameter with centered quarter inch shaft. Panel mount. One section has total of 11 plates (6 rotor, 5 stator); other stator section has two plates. As one section is opened, other closes. Ceramic front and rear frame. \$6.

230. Variable capacitor. 1.5 inch dia plates. 10 rotor, 9 stator plates. Quarter inch centered shaft. Panel mount or mounts via two feet with threaded holes. Looks like about 23 plates per inch spacing. Ceramic front and rear frame. \$6.

If anyone wants all the above variables as a group, call it \$22 plus \$12 UPS ground shipping.

## TEST GEAR

240. Micronta 22-049 VOM. Dusty. Battery holders need cleaning; otherwise inside is very nice. \$3.

241. Triplett Model 310 VOM. \$7.

Both meters (240 and 241) and test leads (242) for \$8 plus \$9 shipping and packing via UPS ground.

## MISCELLANEOUS

250. Bag of Heath parts, coils and transformers, appears to be NOS. Includes 40-882, 40-882, 45-610, 40-882, 40-953, 40-953, 51-97, 51-97, 40-953, 51-97. \$5 for the bag.

251. Crystal for Drake 4-line, 12.6 mhz, for 160 meter coverage. \$6.

252. Crystal for Drake 4-line, 39.1 mhz, for 28-28.5. \$6.

253. Heath switch assembly 63-1340. Consists of four-position rotary switch with long keyed shaft, plus three wafers: two mounted to front, and one with spacers for attachment to intermediate panel. \$7.

254. Bag of "A-B Type G" trimpots. Eleven pieces. These mount in a quarter inch (I'd guess) hole and are screwdriver adjust via a metal shaft. A lock nut secures after adjustment. Unused. Various values. \$5

255. Bag of crystals. All in metal holders, half-inch pin spacing. Frequencies: 1244.6, 12.586, 1768.5, 2425.4, 6577.1, 2419.2, 3115.6, 1718.9, 3103.2, 11990.0, 5866.4, 2332.4, 5919.1, 5.8974, 5.6030, 1278.7, 5.6247. \$4

-----  
Date: Wed, 17 Jul 2002 16:24:29 -0500  
From: Chuck Carpenter <w5usj@9plus.net>  
To: qrp-l@lehigh.edu, George Baker <w5yr@att.net>,  
Lew Paceley <lew@paceley.com>,  
Subject: [129980] NETXQRP Club Meeting 20 July '02  
Message-ID: <3.0.2.32.20020717162429.0082a680@mail.9plus.net>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

QRPers,

The next meeting of the NETXQRP Club will be held this coming Saturday.  
Interested folks are invited to attend.

Saturday  
July 20, 2002  
1:00 to 3:00 PM (or so)

John Y Miguel's Cafe (Tex/Mex & 'merican)  
104 State Highway 205  
Terrell, TX  
Phone: (972) 524-1447

Directions:

Miguel's is on the west side of Terrell. It is on 205 North, near the intersection of I-80, 205, and 148. 205 goes North from I-80 toward Rockwall and 148 goes South back across I-20. Go North on 205 about 1/4 mile and it's on the right. Big place, hard to miss. It's just past a Kuick Kar lube-and-tune place and across the road is a Walmart plaza.

If you have a favorite QRP something you'd like to bring along, please do. Weather permitting we may try some portable operation either behind the restaurant or at a local park in Terrell. Bring an item for the "Door Prize" drawing and come join the fun!

KN5TX -- NETXQRP Club info check our website: <http://www.netxqrp.org/>

Email Alt: w5usj@arrl.net, w5usj@go.com

Chuck Carpenter, W5USJ, Point, Rains Co., TX - EM22cv, NETXQRP #1  
QRP-ARCI #5422, QRP-L #1306, QRPP-I #115, ARS #1280, SOC #57  
Zombie #759, COG #11, 6 Club #201, NETXQRP <http://www.netxqrp.org>

-----  
Date: Wed, 17 Jul 2002 17:57:51 EDT  
From: n5ib@juno.com  
To: dhubbard@callquick.com, elecraft@mailman.qth.net, qrp-1@lehigh.edu  
Subject: [129981] Re: SPECIAL EVENT ANNOUNCEMENT JULY 20-21 MUSEUM SHIPS EVENT  
(RADIO OPS)  
Message-ID: <20020717.154647.4639.1.n5ib@juno.com>

On Tue, 16 Jul 2002 15:21:45 -0700 dhubbard <dhubbard@callquick.com>  
writes:  
>ON JULY 20-21 STARTING AT 00:00GMT APPROXIMATELY 83 MUSEUM SHIPS  
>WORLDWIDE ARE PARTICIPATING IN A SPECIAL MUSEUM SHIPS RADIO EVENT.

Ahoy, gang

Here's your chance to work the USS Kidd, and 2-way CW QRP at that, plus pick up a K2 serial number for your K2 operating awards.

The Kidd (W5KID) will be on from Baton Rouge LA from about 1900 CDT Friday until 1600 CDT Sunday. Most of the ops will want to work SSB, and

20, 15, and 10 will be the bands they'll probably prefer.

But, I'm going to set aside two late night periods to do some QRP CW. The plan is Friday night from 2100 to 2300 CDT, and Saturday night from 2200 to 2400 CDT. I know that's late, but I'm "secondary" to the main operation.

Frequency will be a bit above 7040 or 14060, depending on what band the main station is working. Rig will be K2 #1233 at 5 watts with a sloping dipole up in the rigging. I'll call CQ SOA de W5KID. SOA stands for "Ships On the Air" I'd appreciate one or two of the folks who work me early to post to the list which band I'm on. We'll also try to post it out on the DX cluster.

I want to work as many QRP stations as possible, so we'll work it sort of like a fox hunt, except I'll mostly be listening on my frequency, or very near to it. I'd like to get a name, SPC, and power level from each of you for the log. Milliwatters welcome! Let me hear those TT2s SMKs and Rock Mites.

QSL information (full color photo QSL) can be found by looking up W5KID on qrz.com. I'll make sure that all QSLs for QRP contacts are so identified. And a certificate is available from the USS Salem ARC for working 10 or more ships over the weekend. Plus I believe there is a special award for the most ships worked, separate awards for phone and CW.

I'll get more specific details out as the weekend comes. I might just bring a TT2 along for the cruise.

72

Jim N5IB

USS Kidd ARC, W5KID

USS Kidd DD-661

-----  
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-----  
Date: Wed, 17 Jul 2002 17:21:26 -0500

From: "David Bixler" <qrp@netins.net>

To: "Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>

Subject: [129982] Four State QRP Group Luncheon Get-together This Saturday

Message-ID: <DBEPKBJH00EAHCKKIHPFKEHODFAA.qrp@netins.net>  
MIME-Version: 1.0  
Content-Type: text/plain;  
          charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Greetings QRP'ers:

The July luncheon get-together of the Four State QRP Group  
will be this coming Saturday.

The Four State QRP Group is an informal group of QRP'ers  
in the area near where the states of Missouri, Kansas,  
Oklahoma and Arkansas meet.

Come have lunch and visit with the other area QRP'ers. No  
agenda, no rules, just fun!

Location: Barney's Kitchen (restaurant) in the south end  
          of Seneca, Missouri. This is about 20 miles  
          south of Joplin, right on the Oklahoma state line.

Date: Saturday, July 20th

Time: 11:00 AM till ???

Bring a QRP rig, project, book, magazine, QSL cards, friends,  
spouses, etc. for show and tell. There will be some homebrew  
rigs this month.

After lunch, we will adjourn to the city park for some on-the-  
air fun.

More info is at: <http://www.w0ch.com/fsqrp/index.htm>

If you get lost, I'll have an HT monitoring 146.52 simplex.

72 and hope to see you there....

David Bixler W0CH  
Seneca, MO  
Main Web Site: <http://w0ch.com>  
Mirror Site: <http://showcase.netins.net/web/w0ch>

QRP: Little Radios, Big Fun!

-----

Date: Thu, 18 Jul 2002 02:24:22 +0400  
From: "Oleg V. Borodin" <master72@lipetsk.ru>  
To: <jamesd1@flash.net>,  
"Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>  
Subject: [129983] Re: Rock-Mite Mod #1  
Message-ID: <010301c22de1\$11a961c0\$7de422c3@user.lipetsk.ru>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 8bit

Dear James and ALLs!  
I always think that 20m is a 'King of QRP" Hi.  
Maybe I mistaken? Arguments?  
72! de RV3GM/QRP Oleg V. Borodin from Russia with love!  
QRP...a lot of Clubs...

-----  
: James R. Duffey <jamesd1@flash.net>  
: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>  
: 17 2002 . 7:45  
: Re: Rock-Mite Mod #1

>Gee Chuck (and Dave) - I want one for 30 M, the queen of all QRP bands. I  
am  
>surprised that you don't want one for this band as well. What is involved  
in  
>changing bands? Also, are the component voltage ratings such that one can  
>operate from 2 9V bateries, 18 V total, to get a bit more power? I will  
>supply my own final heatsink. - Dr. Megacycle KK6MC/5  
>--  
>James R. Duffey KK6MC/5  
>Cedar Crest, NM DM65  
>  
>

-----  
Date: Wed, 17 Jul 2002 16:34:11 -0600 (MDT)  
From: "Karl F. Larsen" <k5di@zianet.com>  
To: mgoins@usa.net  
Cc: Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>  
Subject: [129984] Re: Solar Charger control unit  
Message-ID: <Pine.LNX.4.44.0207171633270.11160-100000@Daisy.dog>  
MIME-Version: 1.0



Content-Type: TEXT/PLAIN; charset=US-ASCII

Sorry Mike the web address you give doesn't work. That price is very good!

On Wed, 17 Jul 2002 mgoin@usa.net wrote:

> I just received my order from Electronic Goldmine, and I am more than a little  
> impressed. I was planning to build a solar charger controller (so I can be  
> completely solar powered), when I stumbled upon this one.  
>  
> It is a 150 watt unit that, at \$12.95, was probably about what it would have  
> cost me to build. Has green (charging), yellow (fully charged, and now  
> trickling), and red (blown fuse) LEDs, and comes with a pot so you can set the  
> voltage. Hookup directions are super simple.  
>  
> Part # is SBC010000PEB for anyone interested. (www.goldmine.com)  
>  
> No vested interest. Mileage varies with consumer.  
>  
> mike  
> wb5yjx  
> One watt all the time  
>  
>  
>  
>

--

Yours Truly,

- Karl F. Larsen, (505) 524-3303 -

-----  
Date: Wed, 17 Jul 2002 18:39:46 -0400  
From: "Tom Curtola" <tcurtola@rogers.com>  
To: <k5di@zianet.com>,  
"Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>  
Subject: [129985] Re: Solar Charger control unit  
Message-ID: <001001c22de2\$dace30c0\$f44a9c18@bloor.phub.net.cable.rogers.com>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Try:  
<http://www.goldmine-elec.com/>

----- Original Message -----

From: "Karl F. Larsen" <k5di@zianet.com>  
To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>  
Sent: Wednesday, July 17, 2002 6:34 PM  
Subject: Re: Solar Charger control unit

>  
> Sorry Mike the web address you give doesn't work. That price is very  
> good!  
>  
> On Wed, 17 Jul 2002 mgoins@usa.net wrote:  
>  
> > I just received my order from Electronic Goldmine, and I am more than a little  
> > impressed. I was planning to build a solar charger controller (so I can be  
> > completely solar powered), when I stumbled upon this one.  
> >  
> > It is a 150 watt unit that, at \$12.95, was probably about what it would have  
> > cost me to build. Has green (charging), yellow (fully charged, and now  
> > trickling), and red (blown fuse) LEDs, and comes with a pot so you can set the  
> > voltage. Hookup directions are super simple.  
> >  
> > Part # is SBC010000PEB for anyone interested. (www.goldmine.com)  
> >  
> > No vested interest. Mileage varies with consumer.  
> >  
> > mike  
> > wb5yjx  
> > One watt all the time  
> >  
> >  
> >  
> >  
>  
> --  
> Yours Truly,  
>  
> - Karl F. Larsen, (505) 524-3303 -  
>

-----  
Date: Wed, 17 Jul 2002 18:50:55 -0400

From: "Richard Brummer, K2JQ" <k2jq@rcn.com>  
To: <k5di@zianet.com>,  
"Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>  
Subject: [129986] Re: Solar Charger control unit  
Message-ID: <000801c22de4\$69d11a20\$0300a8c0@dad-s-computer.rcn.com>  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

The correct address is <http://www.goldmine-elec.com/>

Dick K2JQ

-----Original Message-----

From: Karl F. Larsen <k5di@zianet.com>  
To: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>  
Date: Wednesday, July 17, 2002 6:32 PM  
Subject: Re: Solar Charger control unit

>

>Sorry Mike the web address you give doesn't work.

>That price is very good!

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End of QRP-L Digest 2619

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